ArchiCAD MasterTemplate™

Reference Manual and Guide to Practice

© Bobrow Consulting Group
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Last Updated April 17, 2010 for AMT 13

[In Progress]

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OVERVIEW

INTRODUCTION: WHY USE A TEMPLATE?

When you started to work with ArchiCAD, you installed the software and began to learn the tools and methods. You may not have thought much about the initial "blank" file that appeared, ready for you to start to work. In that file, there existed certain layers, linetypes, fills, composites, materials etc. (collectively called Attributes) as well as a basic structure (stories, views, layout masters and layouts). That file was created from a startup "template".

There is a startup template file built into ArchiCAD by Graphisoft. You can access it by doing a New and Reset (hold down the ALT or OPTION key and choose File menu / New and Reset). The basic settings in this file are workable, since they include a variety of attributes and some structure, but will need to be augmented by the user in order to successfully produce a model and construction documentation.

Graphisoft provides in each region a localized template to create a new project when you choose New File from Template. For example, in ArchiCAD 13 in the United States, that template is called ArchiCAD 13 Template.TPL. It has more attributes (materials, fills, layers, etc.) and a more developed structure than the built-in template, however it still leaves a lot of setup work for individual users. This is understandable, since Graphisoft chooses to give a base on which to build, one which is easily understood (simplified) and relatively universal (most everything will be relevant for most users).

There are several alternative options when you start a project. If you choose File menu > New file > Use Current Settings, you will carry forward (from the last file opened or worked on) all of the Attributes, but only a bare minimum of structure. While Attributes such as Layers and Layer Combinations, Materials, Fills, etc. will be inherited, the structure will be minimal, with almost no Views or Layouts to start out. This is a far inferior approach to starting a new project with a template, since you will have to set up so much from scratch.

Once you have worked with ArchiCAD for a while and produced several projects, you may have developed your own template, either explicitly or simply by your work process. It will have the attributes you have found that you need, be personalized with your title block, and be a familiar environment in which to design.

To create a template explicitly is simple: take any project that you are satisfied with, and save the PLN as a template file (File menu > Save As > Template - TPL file). Then, when you start up a new project, you may choose New File from Template, and browse for the TPL file you saved. After opening it, ArchiCAD will rename it Untitled, so you will

not inadvertently overwrite the template, and will prompt you when for a name and location when you Save the PLN file.

If you save an entire project (building and all) as a TPL file, of course you will need to delete the old building before starting a new one. It makes sense to do this BEFORE saving as a TPL, since otherwise you will have to do this every time you start a new file.

However, you don't have to delete everything: you may retain anything you might use in future projects, including Elevation and Section markers which define corresponding Views that are placed onto Layout Sheets. In your new project, you will simply need to move these markers into the appropriate locations for the new building. You will see that those Elevations and Sections are still (already) placed on Layouts and will happily update when you request them to show the new design. Similarly, detail drawings you use in multiple projects can be retained in the TPL file so that you do not have to draw them again or re-import them.

You can get a similar benefit without using a template, by simply saving a copy of a recent project under a new name, then deleting the building and anything else you won't need in your new project. Since it takes time and conscientious effort to delete certain things but leave others in place in an organized way, it makes sense to do this carefully and save the file for later reuse when starting the next project. This is the ultimate rationale for creating an optimized template - saving time and effort when starting and running each project.

This is the key to the ArchiCAD MasterTemplate. There is a tremendous amount that can be set up ahead of time in a robust template file, to save time and improve consistency within and between projects. ArchiCAD resellers and consultants have traditionally offered services to set up office standards and templates, and some have published or sold their templates. In the U.S., there have been templates from Rex Maximilian (MaxATS), Eric Batte (Standardized Template System http://www.getstandardized.com), and AEC Infosystems (http://www.aecinfosystems.com). We are indebted to these people and companies, as well as to many of our own local users such as Van Hohman (Fonda-Bonardi and Hohman Architects), Tamir Barelia, Vincent Moretti, Erika Epstein and others who have shared their ideas with us at ArchiCAD User Group meetings over the years.

We have attempted to synthesize all of our years of experience working with the program (I have 20 years, Scott has 14 years) with all the bright ideas we have seen, to create the best startup template possible: the ArchiCAD MasterTemplate.

We set it up, so you don't have to…

We wish you the best success and enjoyment using ArchiCAD. We know that MasterTemplate will help you work faster and get better and more consistent results. Please give us your feedback via email or the AMT Support Forum.

Eric Bobrow
Creator of the ArchiCAD MasterTemplate

PURPOSE OF THE ARCHICAD MASTERTEMPLATE

- A starting environment that allows a streamlined workflow, with the objective of getting better work out more quickly with less frustration and fewer errors.
- Enhances both the modeling & construction document process.
- After initial use that includes first time setup, never again waste time recreating a project file or settings.
- Create a repeatable and reliable office standard, thereby reducing errors.
- Make the best use of ArchiCAD's automated features.
- Foster office standardization.
- Designed to teach at the same time as providing a working framework.
- What the template is NOT:
    - one-size-fits-all
    - perfect without any changes
    - resistant to improvement

The ArchiCAD MasterTemplate is fully customizable, yet designed to be used out of box with minor 'fill in the blanks' items.

TEMPLATE ORGANIZATION AND STRUCTURE

It may be useful at this point to describe architectural projects designed and documented in a CAD or BIM system as being comprised of four inter-related schema:

Geometry: the actual form, shape and materials of the building design; also the geometry projected into standard orthographic drawings (e.g. plans, sections, elevations, details)

Annotation: the text, labeling, call-out markers and dimensioning that describe the building in each drawing

Attributes: the line-types, wall types, layers and layer combinations, fills, materials that are used to depict and control the appearance of geometry on the drawings

Structure: the relationships

- between annotated, attributed geometry and actual drawings (e.g. View definitions of layer combination, scale, model view options, etc.),
- between each drawing and other related ones (e.g. plans to sections to elevations and from any of these to detail drawings),
- between elements in the design and the schedules used to tabulate and summarize them,
- between the drawings and the layout sheets, and
- between drawings or layouts and various output sets (e.g. print or plot sets, submissions of files to consultants, etc.)

A template in a CAD or BIM system in general does not contain an actual building design, nor the annotations of any particular building. However, it is best if it contains all or most of the attributes needed to describe buildings in the system, plus as much structure as can be set up ahead of time. This will minimize the work getting each project started, guarantee consistency between projects as well as within each project, and streamline the workflow in a variety of ways.

The ArchiCAD MasterTemplate contains both Attributes and Structure preset and ready to go.

- Optimized layer naming system
- Extensive layer combinations

- Coordinated Model View Options
- Predefined Autotext fields ready for data entry pre-placed onto layout sheets
- Pre-defined Views in the View Map
- Pre-defined Master & Layout Sheets
- Pre-placed Drawings on Layout Sheets.
- Detailer template and modules fully integrated
- Example penset systems to be considered in evaluation of your own system
- Integrates the best free third party library parts
- Included modified interactive schedules
- Sample complex profiles for rafter tails, street roadwork, walls with framing, etc.
- Typical project folder structure - a place for everything, everything in its place

WHAT'S INCLUDED

The **ArchiCAD MasterTemplate** is made up of the following:

- **ArchiCAD MasterTemplate.TPL** (a blank template file you will customize, then use to start your next project)
- **MasterTemplate SAMPLE.PLN** (an example demonstration project) as well as **MasterTemplate SAMPLE REMODEL-ADDITION.PLN** (an example of a remodel project)
- **MasterTemplate LIBRARY** (a folder containing the supporting library, modules, preferences and favorites)
- **AMT PROJECT FOLDER** (a sample folder structure for your project data)
- **AMT DOCUMENTATION** (this manual, the QuickStart Guide, and other supporting files)

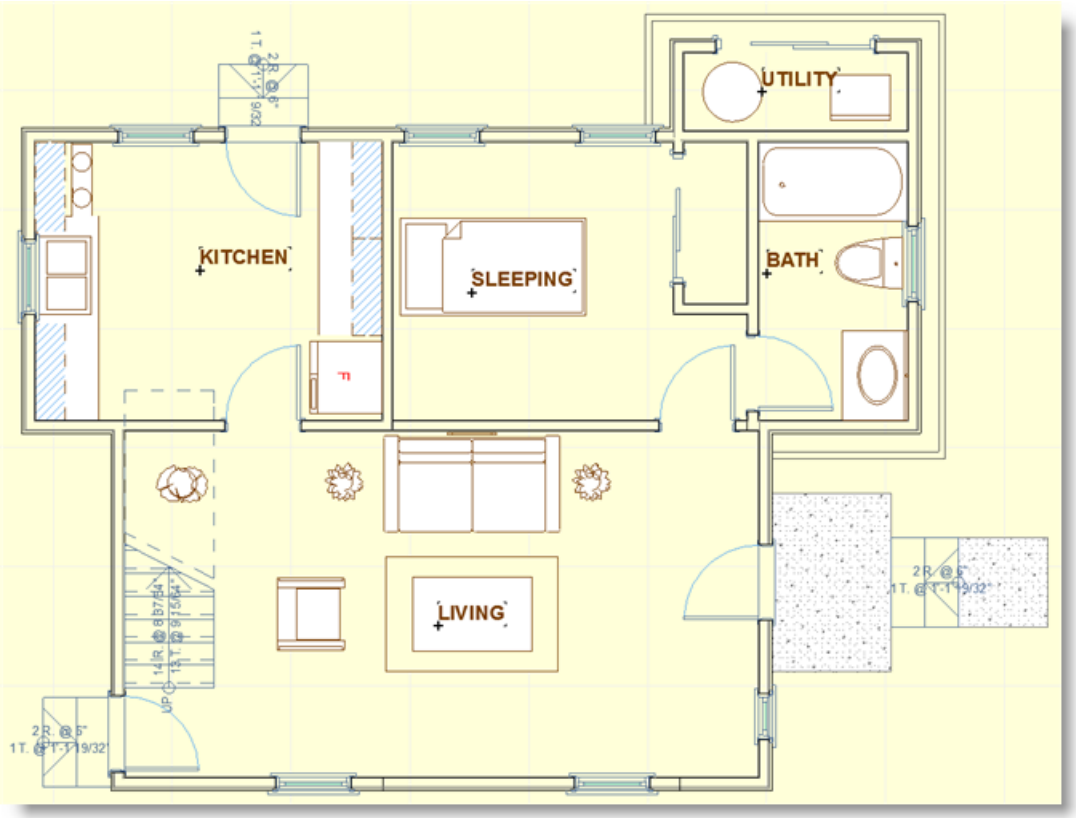
DOWNLOAD AND QUICK TOUR OF THE ARCHICAD MASTERTEMPLATE

Please follow the instructions supplied with your purchase to download the template files. They are supplied as a single large Zip archive file (or multiple smaller Zip files), and will need to be extracted or expanded into a folder somewhere on your workstation.

Place this AMT folder wherever convenient for now, such as on your Desktop. Later we'll discuss strategies for where to store your template files, which will vary depending on whether you are working alone or setting this up for a whole office.

Start by opening the **MasterTemplate 13 SAMPLE Project.pla** file to see how we have set up and organized this system. We assume that you have a basic knowledge of project navigation and the menu structure within ArchiCAD.

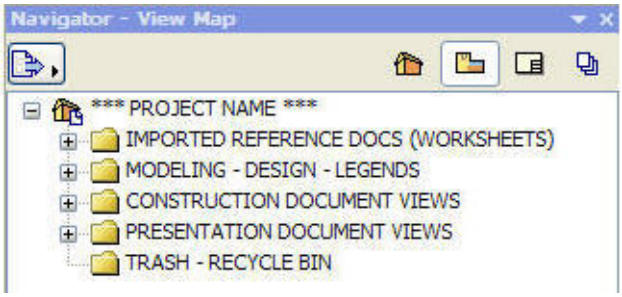
If you get any warning messages about Hotlinked Modules, missing links to external Drawings, or Views that are not up to date, you may ignore them for now - click OK or Skip until you get to see the floor plan of this small residential project example.



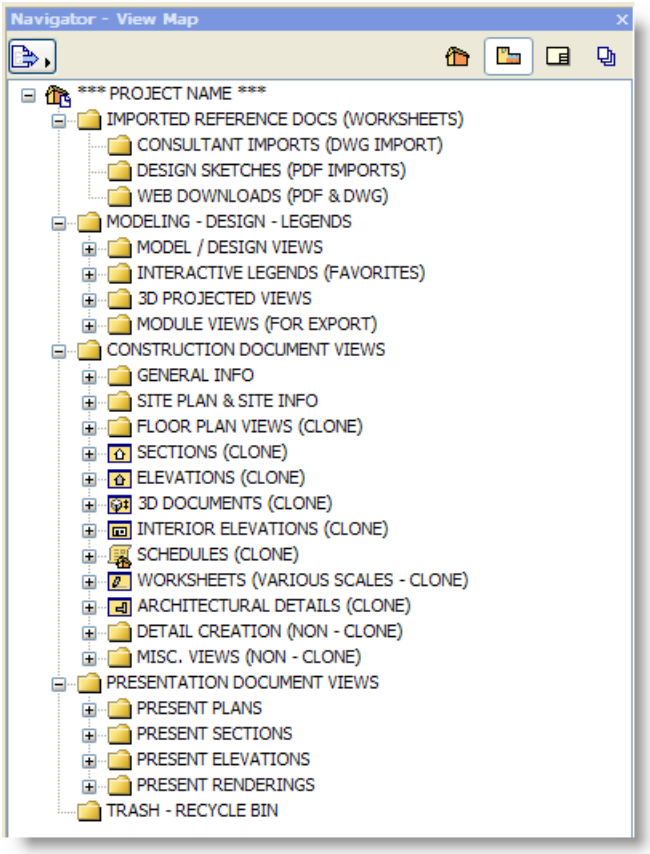
THE VIEW MAP

Once this simple file is open, if you glance at the Project Map, you will see just a few stories, elevations, sections, worksheets, etc. It is, after all, just a small two story house.

However, when you look at the View Map, you will discover there are close to 200 predefined Views, grouped into four major categories:



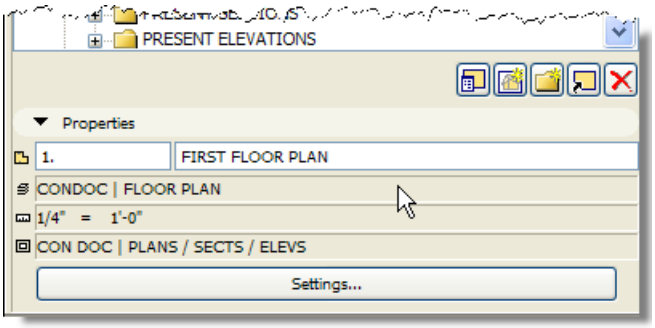
When you open the main View folders to the next level, you will see additional subgroupings:

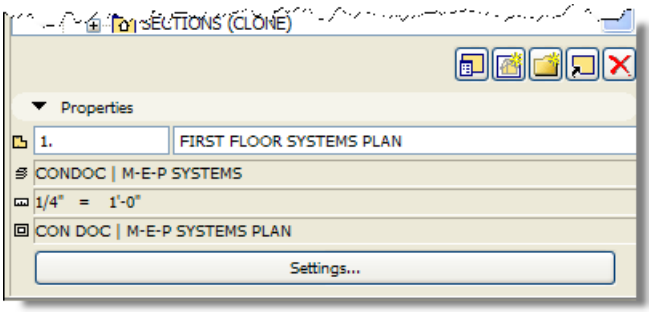


Some of these (e.g. Design Sketches or Web Downloads) are empty folders, others are folders that contain preset views, and some are "Clone" folders (more on that later). We suggest you explore by opening up these folders and double-clicking each View to see all the different ways the project information can be represented. The beauty of this system (and ArchiCAD itself) is that most of these Views will show appropriate information without any effort on your part: simply model the building, and the View will be ready for you to annotate.

NOTE: The **TRASH - RECYCLE BIN** folder is available for you to place anything you don't need but want to save for later use, such as Detail Folders while you are in early design.

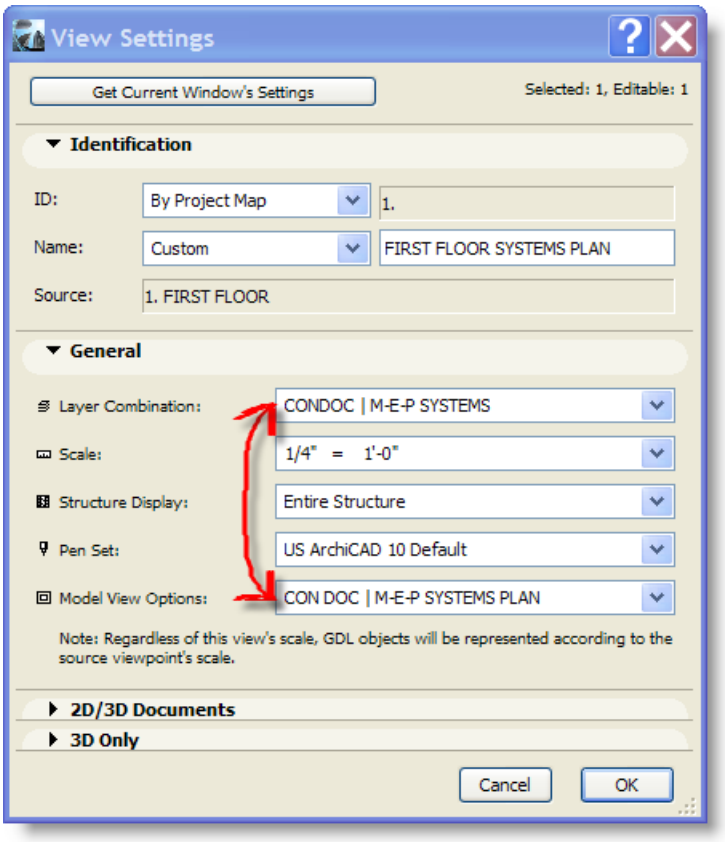
As you activate each View, ArchiCAD will set the Layer Combination, Scale and Model View Option based on the View Settings. In the Properties area at the bottom of the Navigator View Map, you'll see this information displayed:





Notice that the Layer Combinations and Model View Options (MVO) have similar names (e.g. Layer Combination = CONDOC | M-E-P SYSTEMS; Model View Option = CON DOC | M-E-P SYSTEMS PLAN).

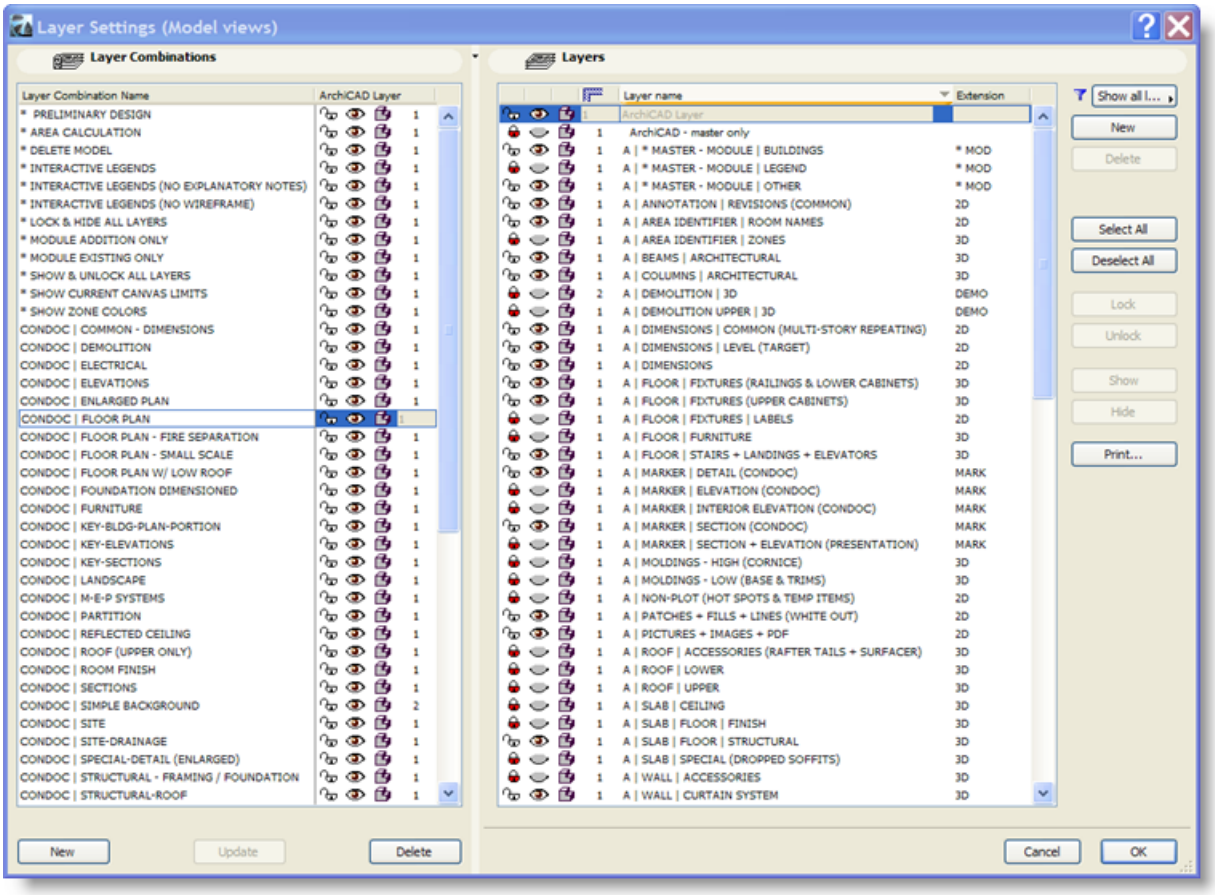
Each Layer Combination is unique, while a number of the MVOs are essentially the same; we have opted to create additional (duplicate) MVOs to make it easier to correspond the right MVO with each Layer Combo.



Since the View Settings are already saved with the correct combinations, most of the time you won't have to think about choosing a MVO to go with your Layers for a construction document.

LAYERS, LAYER COMBINATIONS & MODEL VIEW OPTIONS

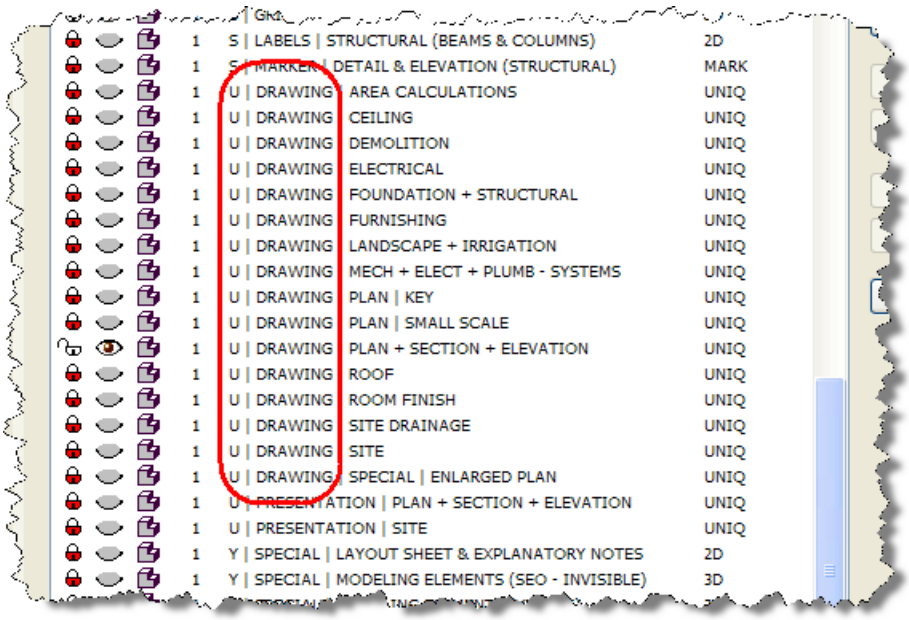
Open up the Layer Settings dialog and explore the Layer naming conventions.


Layer Settings (Model views)
Layer Combinations
Layer Combination Name
ArchiCAD Layer
* PRELIMINARY DESIGN
* AREA CALCULATION
* DELETE MODEL
* INTERACTIVE LEGENDS
* INTERACTIVE LEGENDS (NO EXPLANATORY NOTES)
* INTERACTIVE LEGENDS (NO WIREFRAME)
* LOCK & HIDE ALL LAYERS
* MODULE ADDITION ONLY
* MODULE EXISTING ONLY
* SHOW & UNLOCK ALL LAYERS
* SHOW CURRENT CANVAS LIMITS
* SHOW ZONE COLORS
CONDOC | COMMON - DIMENSIONS
CONDOC | DEMOLITION
CONDOC | ELECTRICAL
CONDOC | ELEVATIONS
CONDOC | ENLARGED PLAN
CONDOC | FLOOR PLAN
CONDOC | FLOOR PLAN - FIRE SEPARATION
CONDOC | FLOOR PLAN - SMALL SCALE
CONDOC | FLOOR PLAN W/ LOW ROOF
CONDOC | FOUNDATION DIMENSIONED
CONDOC | FURNITURE
CONDOC | KEY-BLDG-PLAN-PORTION
CONDOC | KEY-ELEVATIONS
CONDOC | KEY-SECTIONS
CONDOC | LANDSCAPE
CONDOC | M-E-P SYSTEMS
CONDOC | PARTITION
CONDOC | REFLECTED CEILING
CONDOC | ROOF (UPPER ONLY)
CONDOC | ROOM FINISH
CONDOC | SECTIONS
CONDOC | SIMPLE BACKGROUND
CONDOC | SITE
CONDOC | SITE-DRAINAGE
CONDOC | SPECIAL-DETAIL (ENLARGED)
CONDOC | STRUCTURAL - FRAMING / FOUNDATION
CONDOC | STRUCTURAL-ROOF
New
Update
Delete
Layers
Layer name
Extension
ArchiCAD Layer
ArchiCAD - master only
A | * MASTER - MODULE | BUILDINGS
A | * MASTER - MODULE | LEGEND
A | * MASTER - MODULE | OTHER
A | ANNOTATION | REVISIONS (COMMON)
A | AREA IDENTIFIER | ROOM NAMES
A | AREA IDENTIFIER | ZONES
A | BEAMS | ARCHITECTURAL
A | COLUMNS | ARCHITECTURAL
A | DEMOLITION | 3D
A | DEMOLITION UPPER | 3D
A | DIMENSIONS | COMMON (MULTI-STORY REPEATING)
A | DIMENSIONS | LEVEL (TARGET)
A | DIMENSIONS
A | FLOOR | FIXTURES (RAILINGS & LOWER CABINETS)
A | FLOOR | FIXTURES (UPPER CABINETS)
A | FLOOR | FIXTURES | LABELS
A | FLOOR | FURNITURE
A | FLOOR | STAIRS + LANDINGS + ELEVATORS
A | MARKER | DETAIL (CONDOC)
A | MARKER | ELEVATION (CONDOC)
A | MARKER | INTERIOR ELEVATION (CONDOC)
A | MARKER | SECTION (CONDOC)
A | MARKER | SECTION + ELEVATION (PRESENTATION)
A | MOLDINGS - HIGH (CORNICE)
A | MOLDINGS - LOW (BASE & TRIMS)
A | NON-PLOT (HOT SPOTS & TEMP ITEMS)
A | PATCHES + FILLS + LINES (WHITE OUT)
A | PICTURES + IMAGES + PDF
A | ROOF | ACCESSORIES (RAFTER TAILS + SURFACER)
A | ROOF | LOWER
A | ROOF | UPPER
A | SLAB | CEILING
A | SLAB | FLOOR | FINISH
A | SLAB | FLOOR | STRUCTURAL
A | SLAB | SPECIAL (DROPPED SOFFITS)
A | WALL | ACCESSORIES
A | WALL | CURTAIN SYSTEM
Show all l...
New
Delete
Select All
Deselect All
Lock
Unlock
Show
Hide
Print...
Cancel
OK

You'll see that we followed the common convention of a single letter for the main category followed by subcategory groupings, but have broadened it from the AIA or NCS (National CAD) standards. There is little reason to use just 4 letter groups, since layer names can be longer now than they used to be, so we use easily readable phrasings.

AMT uses the Extension for grouping layers with common purposes (e.g. 3D for model elements that will also be seen in drawings, 2D for annotation seen only in drawings, along with some specialized designations).

One special innovation is the use of the "U" prefix (as opposed to A, C, E, etc.) for elements that are only seen in ONE drawing. These can be of any type, 3D or 2D, text or model, as long as they are only to be seen in one construction document.


1 S | LABELS | STRUCTURAL (BEAMS & COLUMNS) 2D
1 S | MARKER | DETAIL & ELEVATION (STRUCTURAL) MARK
1 U | DRAWING | AREA CALCULATIONS UNIQ
1 U | DRAWING | CEILING UNIQ
1 U | DRAWING | DEMOLITION UNIQ
1 U | DRAWING | ELECTRICAL UNIQ
1 U | DRAWING | FOUNDATION + STRUCTURAL UNIQ
1 U | DRAWING | FURNISHING UNIQ
1 U | DRAWING | LANDSCAPE + IRRIGATION UNIQ
1 U | DRAWING | MECH + ELECT + PLUMB - SYSTEMS UNIQ
1 U | DRAWING | PLAN | KEY UNIQ
1 U | DRAWING | PLAN | SMALL SCALE UNIQ
1 U | DRAWING | PLAN + SECTION + ELEVATION UNIQ
1 U | DRAWING | ROOF UNIQ
1 U | DRAWING | ROOM FINISH UNIQ
1 U | DRAWING | SITE DRAINAGE UNIQ
1 U | DRAWING | SITE UNIQ
1 U | DRAWING | SPECIAL | ENLARGED PLAN UNIQ
1 U | PRESENTATION | PLAN + SECTION + ELEVATION UNIQ
1 U | PRESENTATION | SITE UNIQ
1 Y | SPECIAL | LAYOUT SHEET & EXPLANATORY NOTES 2D
1 Y | SPECIAL | MODELING ELEMENTS (SEO - INVISIBLE) 3D

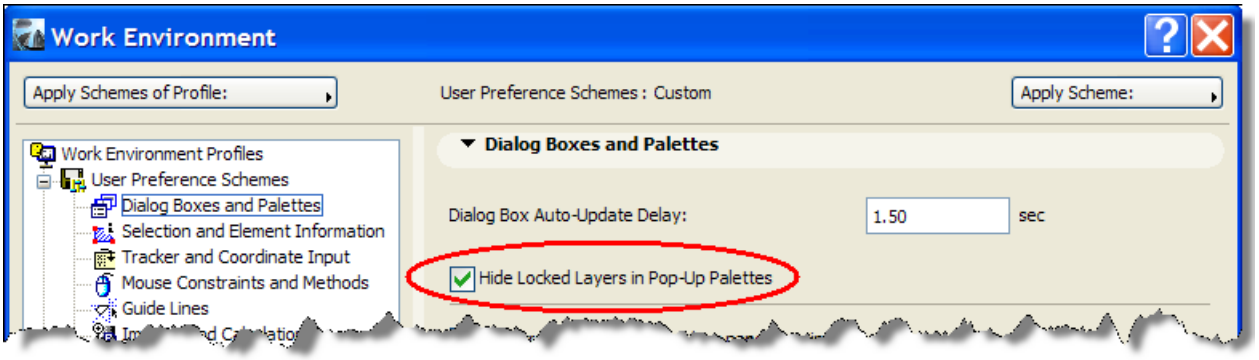
For example, the Electrical Plan will include some objects (receptacles, switches, etc.), text, labels and perhaps dimensions that are only on that drawing. These elements go on the U | ELECTRICAL layer. This convention makes it easier to decide which layer to put things on.

For visual clarity, AMT uses vertical “pipe” separators (|) rather than dashes (-) to break up phrase groups in layers, layer combos, MVOs and other lists. We feel it makes it easier to scan the lists.

> **TIP:** The “pipe” character is not used very frequently, and some users have asked where to find it on the keyboard. It is usually on the far right side, in the middle section above the backslash (“\”) character.

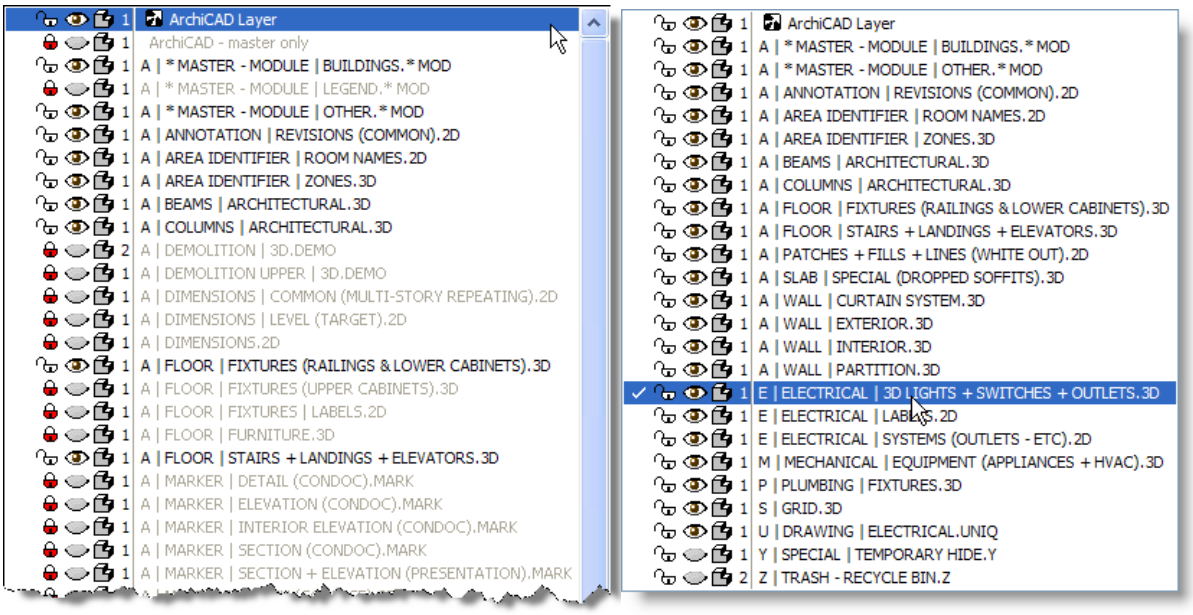
An alternate set of layer names is available for compatibility with industry standards such as the AIA, National CAD Standard (NCS) or the Uniform Drawing System (UDS). These layer names are set up in an NCS-UDS Attribute Manager (.aat) file which makes it easy to switch at any time during the project lifecycle if your firm prefers or needs to use this layer naming system.

Layer Combinations have been defined for all standard drawings as well as for modeling, detailing and other dedicated activities. Note that as you activate each Layer Combo, layers that are hidden are also LOCKED, which allows them to be omitted when you are using popup palettes to choose which layer to place an element. This makes the layer popup list much shorter, allowing you to see only the appropriate layers for each construction document View. Be sure to set your Options menu > Work Environment > Dialog Boxes and Palettes to “Hide Locked Layers in Popup Palettes.”



Below are two examples of the Layer menu popup seen when the CONDOC | ELECTRICAL layer combination is active. On the left is what you see when the “Hide Locked Layers” is NOT checked. It shows the beginning of a long cumbersome list of all the Layers, including ones that are currently hidden since they are not relevant to electrical drawings.

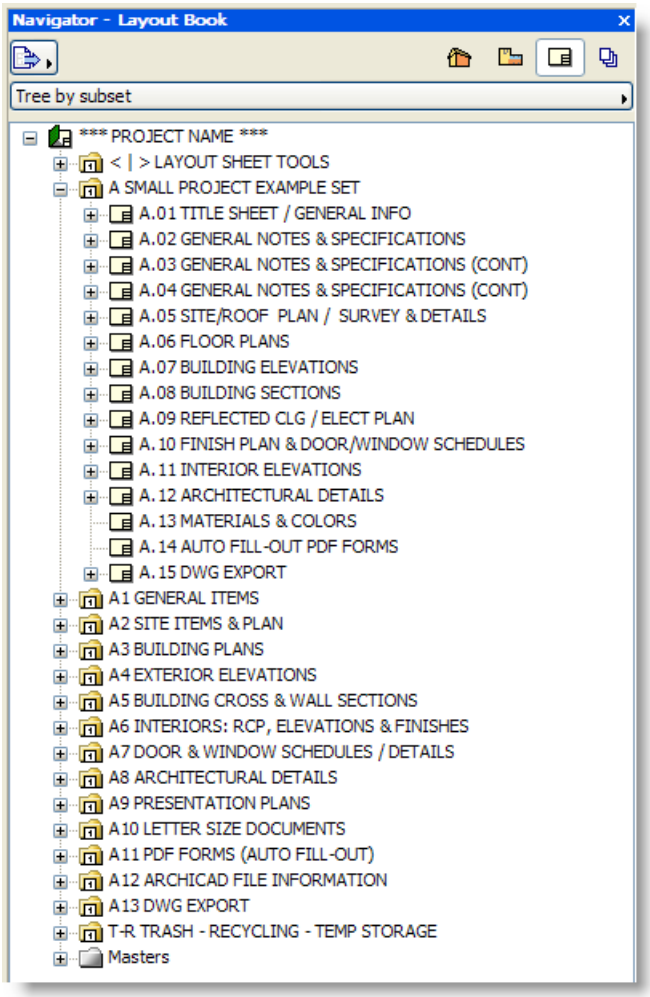
Choosing the appropriate layer from such a list is much more effort than working with the one on the right, when the “Hide Locked Layers” is checked. It shows ONLY the layers that are visible for electrical work, a much simpler list to work with!


ArchiCAD Layer
ArchiCAD - master only
A | * MASTER - MODULE | BUILDINGS.* MOD
A | * MASTER - MODULE | LEGEND.* MOD
A | * MASTER - MODULE | OTHER.* MOD
A | ANNOTATION | REVISIONS (COMMON).2D
A | AREA IDENTIFIER | ROOM NAMES.2D
A | AREA IDENTIFIER | ZONES.3D
A | BEAMS | ARCHITECTURAL.3D
A | COLUMNS | ARCHITECTURAL.3D
A | DEMOLITION | 3D.DEMO
A | DEMOLITION UPPER | 3D.DEMO
A | DIMENSIONS | COMMON (MULTI-STORY REPEATING).2D
A | DIMENSIONS | LEVEL (TARGET).2D
A | DIMENSIONS.2D
A | FLOOR | FIXTURES (RAILINGS & LOWER CABINETS).3D
A | FLOOR | FIXTURES (UPPER CABINETS).3D
A | FLOOR | FIXTURES | LABELS.2D
A | FLOOR | FURNITURE.3D
A | FLOOR | STAIRS + LANDINGS + ELEVATORS.3D
A | MARKER | DETAIL (CONDOC).MARK
A | MARKER | ELEVATION (CONDOC).MARK
A | MARKER | INTERIOR ELEVATION (CONDOC).MARK
A | MARKER | SECTION (CONDOC).MARK
A | MARKER | SECTION + ELEVATION (PRESENTATION).MARK
ArchiCAD Layer
A | * MASTER - MODULE | BUILDINGS.* MOD
A | * MASTER - MODULE | OTHER.* MOD
A | ANNOTATION | REVISIONS (COMMON).2D
A | AREA IDENTIFIER | ROOM NAMES.2D
A | AREA IDENTIFIER | ZONES.3D
A | BEAMS | ARCHITECTURAL.3D
A | COLUMNS | ARCHITECTURAL.3D
A | FLOOR | FIXTURES (RAILINGS & LOWER CABINETS).3D
A | FLOOR | STAIRS + LANDINGS + ELEVATORS.3D
A | PATCHES + FILLS + LINES (WHITE OUT).2D
A | SLAB | SPECIAL (DROPPED SOFFITS).3D
A | WALL | CURTAIN SYSTEM.3D
A | WALL | EXTERIOR.3D
A | WALL | INTERIOR.3D
A | WALL | PARTITION.3D
E | ELECTRICAL | 3D LIGHTS + SWITCHES + OUTLETS.3D
E | ELECTRICAL | LABELS.2D
E | ELECTRICAL | SYSTEMS (OUTLETS - ETC).2D
M | MECHANICAL | EQUIPMENT (APPLIANCES + HVAC).3D
P | PLUMBING | FIXTURES.3D
S | GRID.3D
U | DRAWING | ELECTRICAL.UNIQ
Y | SPECIAL | TEMPORARY HIDE.Y
Z | TRASH - RECYCLE BIN.Z

This Work Environment preference is included in the AMT Work Environment profile (supplied with AMT) that you can import, which sets up a number of useful options. Please see the appendix for how to use the AMT Work Environment Profile.

THE LAYOUT BOOK

Explore the Layout Book as well. The simple structure of the Layout Book (see graphic below) includes the skeletal form that can grow to handle projects of any arbitrary size. Open up the subset folders as well as the Masters and explore the layout sheets to see what has been set up.


Navigator - Layout Book
Tree by subset
*** PROJECT NAME ***
< | > LAYOUT SHEET TOOLS
A SMALL PROJECT EXAMPLE SET
A.01 TITLE SHEET / GENERAL INFO
A.02 GENERAL NOTES & SPECIFICATIONS
A.03 GENERAL NOTES & SPECIFICATIONS (CONT)
A.04 GENERAL NOTES & SPECIFICATIONS (CONT)
A.05 SITE/ROOF PLAN / SURVEY & DETAILS
A.06 FLOOR PLANS
A.07 BUILDING ELEVATIONS
A.08 BUILDING SECTIONS
A.09 REFLECTED CLG / ELECT PLAN
A. 10 FINISH PLAN & DOOR/WINDOW SCHEDULES
A. 11 INTERIOR ELEVATIONS
A. 12 ARCHITECTURAL DETAILS
A. 13 MATERIALS & COLORS
A. 14 AUTO FILL-OUT PDF FORMS
A. 15 DWG EXPORT
A1 GENERAL ITEMS
A2 SITE ITEMS & PLAN
A3 BUILDING PLANS
A4 EXTERIOR ELEVATIONS
A5 BUILDING CROSS & WALL SECTIONS
A6 INTERIORS: RCP, ELEVATIONS & FINISHES
A7 DOOR & WINDOW SCHEDULES / DETAILS
A8 ARCHITECTURAL DETAILS
A9 PRESENTATION PLANS
A10 LETTER SIZE DOCUMENTS
A11 PDF FORMS (AUTO FILL-OUT)
A12 ARCHICAD FILE INFORMATION
A13 DWG EXPORT
T-R TRASH - RECYCLING - TEMP STORAGE
Masters

You'll see that we have two sets of layouts, one based on a simple numerical sequence (drawings A.01 through A.15 in the SMALL PROJECT EXAMPLE SET) and the other based on hierarchical category Subsets (e.g. A300 series for the BUILDING PLANS, A400 Series for the EXTERIOR ELEVATIONS, etc.).

In your office, you may prefer the simpler option or may need the more complex system, or you may change depending on the project size. Both of them are included for you to use "as is" or to customize. For example, you can change the numbering format from

A3.01 and A3.02 to A301 and A302, etc.; or insert, renumber, rename or reorder these Subsets and all Layouts within them.

Pay particular attention to the Title Page layout, on which there are a multitude of Autotext entries placed directly on the sheet. Many of these are set up in the Project Info database and will automatically update when information is entered or changed. Experiment by opening up the File menu > Info > Project Info command and filling in some of the data there, then return to the Title layout to view the result.

NOTE: As a convention in MasterTemplate, uninitiated entries in the Project Info have multiple asterisks (e.g. ***PROJECT NAME***) to make it easy to spot information that has not been initialized or filled in.

Remember, all that is in this sample file is in the actual ArchiCAD MasterTemplate, which is fully customizable to suit your needs.

For now, our brief tour of the sample file is done. We will point you to this file at other points in the manual to illustrate other features and techniques.

SETUP AND CUSTOMIZATION

WHERE TO SET UP THE ARCHICAD MASTERTEMPLATE

- ArchiCAD MasterTemplate Folder location.
- Projects Folder structure and location
- Template Support Files & Folder

For sole practitioners, we suggest that you set up an ArchiCAD Office Standards (AOS) folder inside your Jobs or Projects folder (where you keep all current projects). In a multi-person office, the AOS folder should be located on your server in a location accessible by all team members.

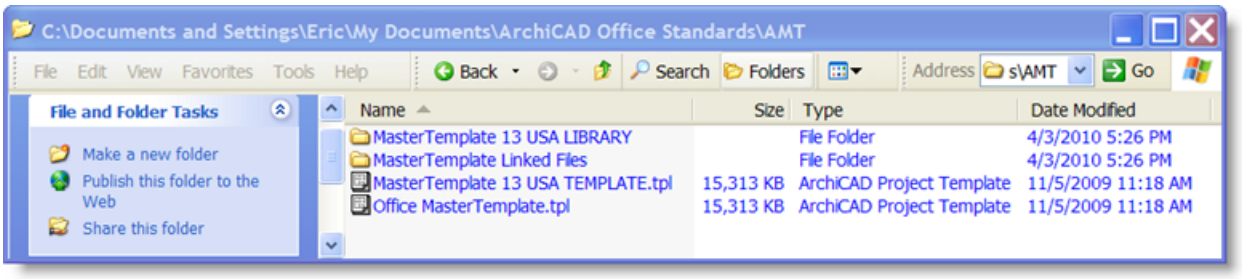
When you downloaded and extracted the template files, you placed them on your Desktop or some convenient place. Keep the original download files safe as a backup or reference, then place a copy into your ArchiCAD Office Standards folder.

The AOS folder should contain the AMT (MasterTemplate) folder, as well as other support files used in your office for working in ArchiCAD, such as custom libraries, collection of detail drawings, boilerplate PDFs and Word files for placement into construction documents, etc.

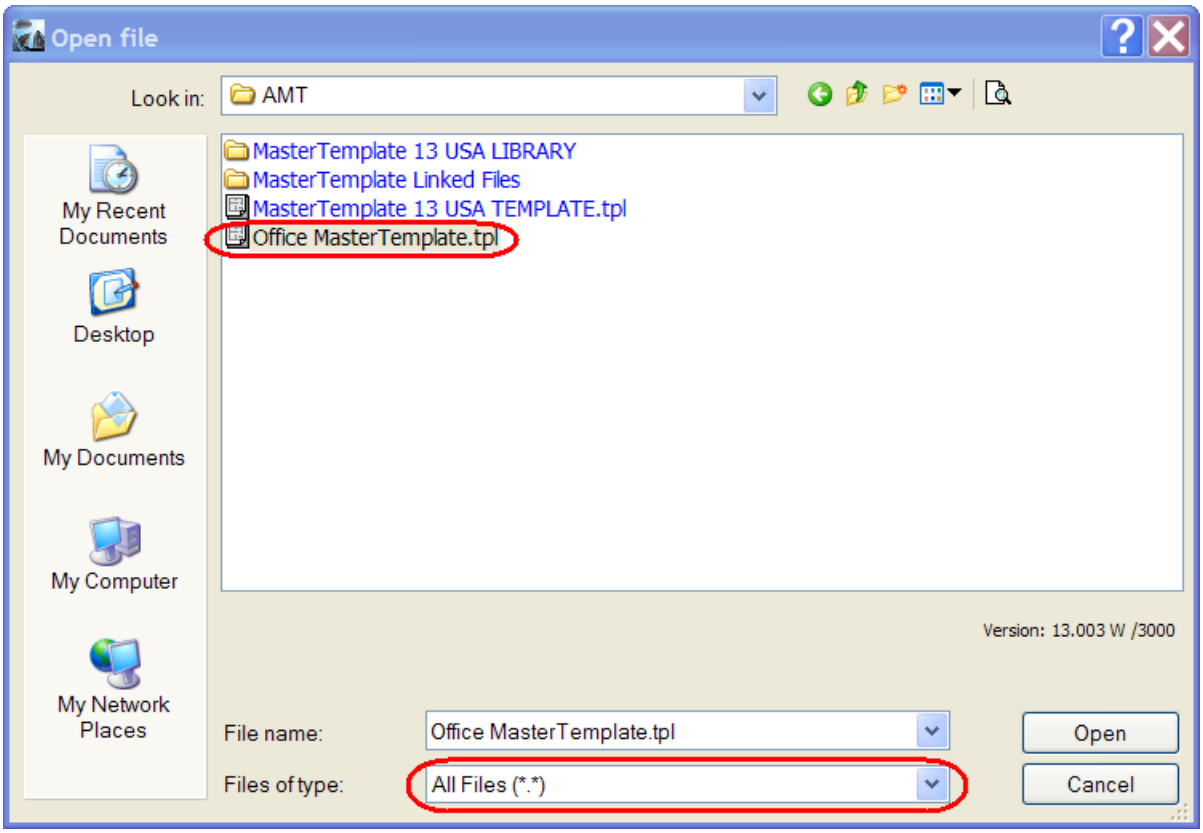
CUSTOMIZE YOUR MASTERTEMPLATE

You will need to customize the ArchiCAD MasterTemplate to have your firm's information in the title block and on the Title sheet. Since the AMT is an ordinary ArchiCAD PLN project file saved as a TPL template file, you can modify anything else you wish, right away or at a later date.

First, you'll need to duplicate the original AMT file to create your personal copy. Using Windows Explorer or the Finder (rather than from inside a dialog box while running ArchiCAD), navigate to the AMT folder. Select the ArchiCAD MasterTemplate.TPL file and right-click to Copy, then immediately afterwards right-click in the same folder and Paste. You will now have a duplicate AMT file. Rename it **Office MasterTemplate.tpl** or **ABC Architects MasterTemplate.tpl** or anything you wish. You now have a custom template you will make specific to your office.


C:\Documents and Settings\Eric\My Documents\ArchiCAD Office Standards\AMT
File Edit View Favorites Tools Help
Back Search Folders Address s\AMT Go
File and Folder Tasks
Make a new folder
Publish this folder to the Web
Share this folder
Name Size Type Date Modified
MasterTemplate 13 USA LIBRARY File Folder 4/3/2010 5:26 PM
MasterTemplate Linked Files File Folder 4/3/2010 5:26 PM
MasterTemplate 13 USA TEMPLATE.tpl 15,313 KB ArchiCAD Project Template 11/5/2009 11:18 AM
Office MasterTemplate.tpl 15,313 KB ArchiCAD Project Template 11/5/2009 11:18 AM

Whenever you wish to customize or revise your Office MasterTemplate, you will need to open it up differently than you when you start work on an actual project. Start ArchiCAD and choose Open File > Browse for File (or with ArchiCAD already running, go to the File menu and select Open). In the Open File dialog box, choose as the file type (from the popup) "TPL Template File" (or "All Files"), and navigate to and select your new custom **Office MasterTemplate.tpl** file (or whatever you named it).



When opened in this fashion, you will have access to revising and resaving it most easily. You will see its file name at the top of the screen, rather than Untitled.

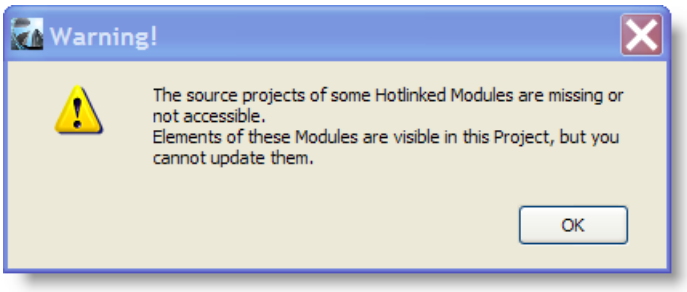
> **TIP:** This is very important! If you see Untitled at the top of the screen instead of the name of your office template, any changes you make will not be automatically saved to your custom template. We suggest you close the Untitled file, and open your **Office MasterTemplate.tpl** again in exactly the way just described, so you have proper access to the file.

CLEANING UP ANY WARNING MESSAGES

Normally a Library Manager dialog will not appear when you load the file. If the Library Manager dialog pops up, you will need to tell ArchiCAD where to find the appropriate libraries. ArchiCAD will find the MASTERTEMPLATE LIBRARY folder without prompting as long as you leave it next to the Office MasterTemplate.tpl file in the AMT folder. Similarly, it will find the standard ArchiCAD Library folder, unless you have moved or changed the path.

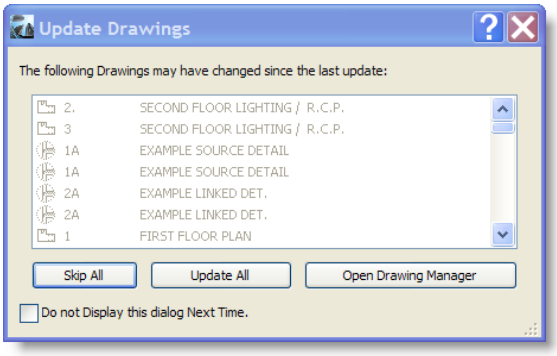
However, if you need to show the Library Manager where either of these folders are located, you may click the Add… button at the top of the Library Manager dialog box. Navigate to and select the appropriate folder, then click the Choose button to add it to the list of libraries to load. (If you have any problems or questions on how to do this, please email us or contact your ArchiCAD reseller for guidance.) This will be remembered the next time you open or use the AMT file.

One of the messages you will get the first time you open AMT will refer to missing Hotlinked Module files.


Warning!
The source projects of some Hotlinked Modules are missing or not accessible.
Elements of these Modules are visible in this Project, but you cannot update them.
OK

Since these support files are not found in their original location (on the computer where they were created), you will need to help ArchiCAD find their current location on your workstation or network. Click OK, we'll get that cleaned up shortly.

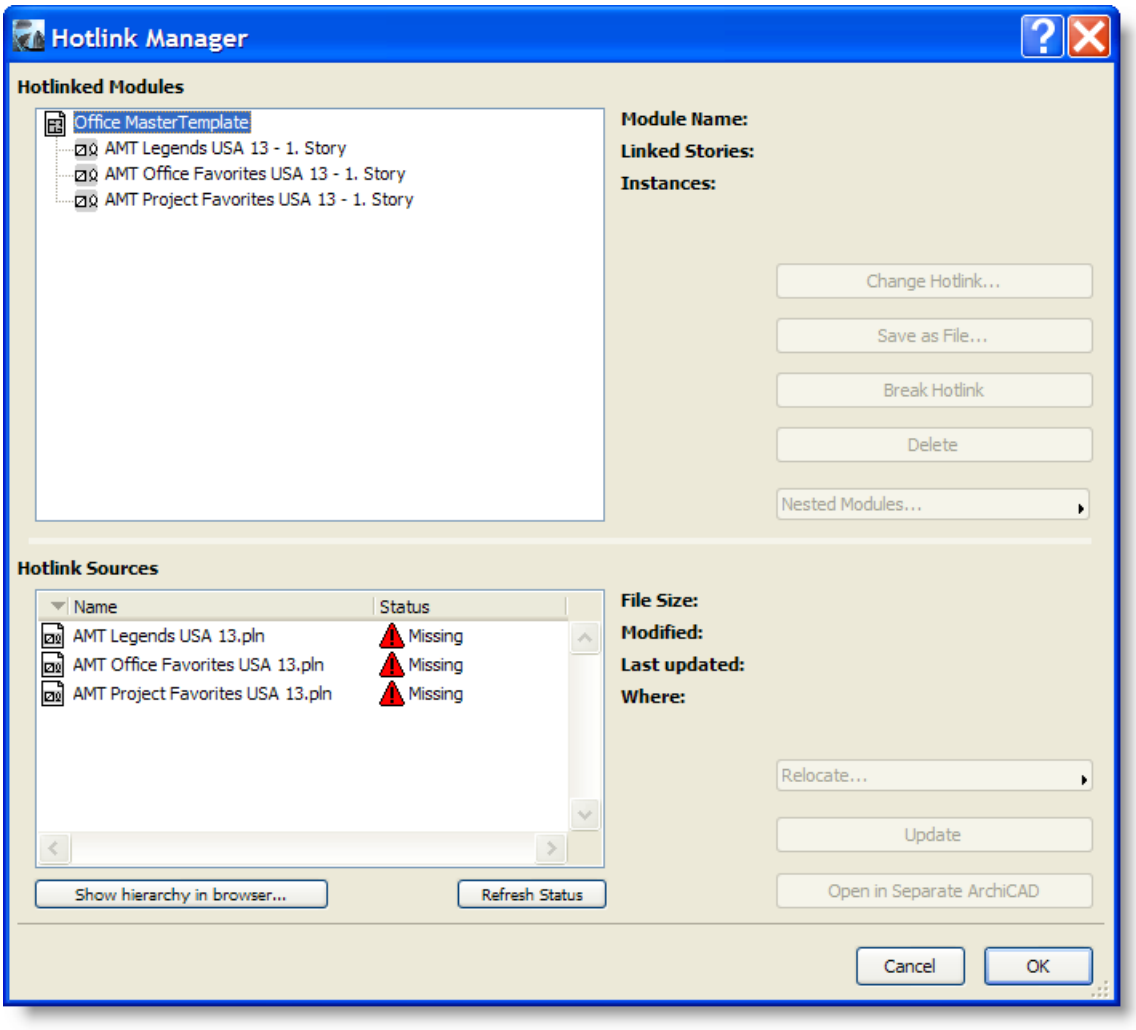
You may also get the standard Update Drawings warning message:


Update Drawings
The following Drawings may have changed since the last update:
2. SECOND FLOOR LIGHTING / R.C.P.
3 SECOND FLOOR LIGHTING / R.C.P.
1A EXAMPLE SOURCE DETAIL
1A EXAMPLE SOURCE DETAIL
2A EXAMPLE LINKED DET.
2A EXAMPLE LINKED DET.
1 FIRST FLOOR PLAN
Skip All
Update All
Open Drawing Manager
Do not Display this dialog Next Time.

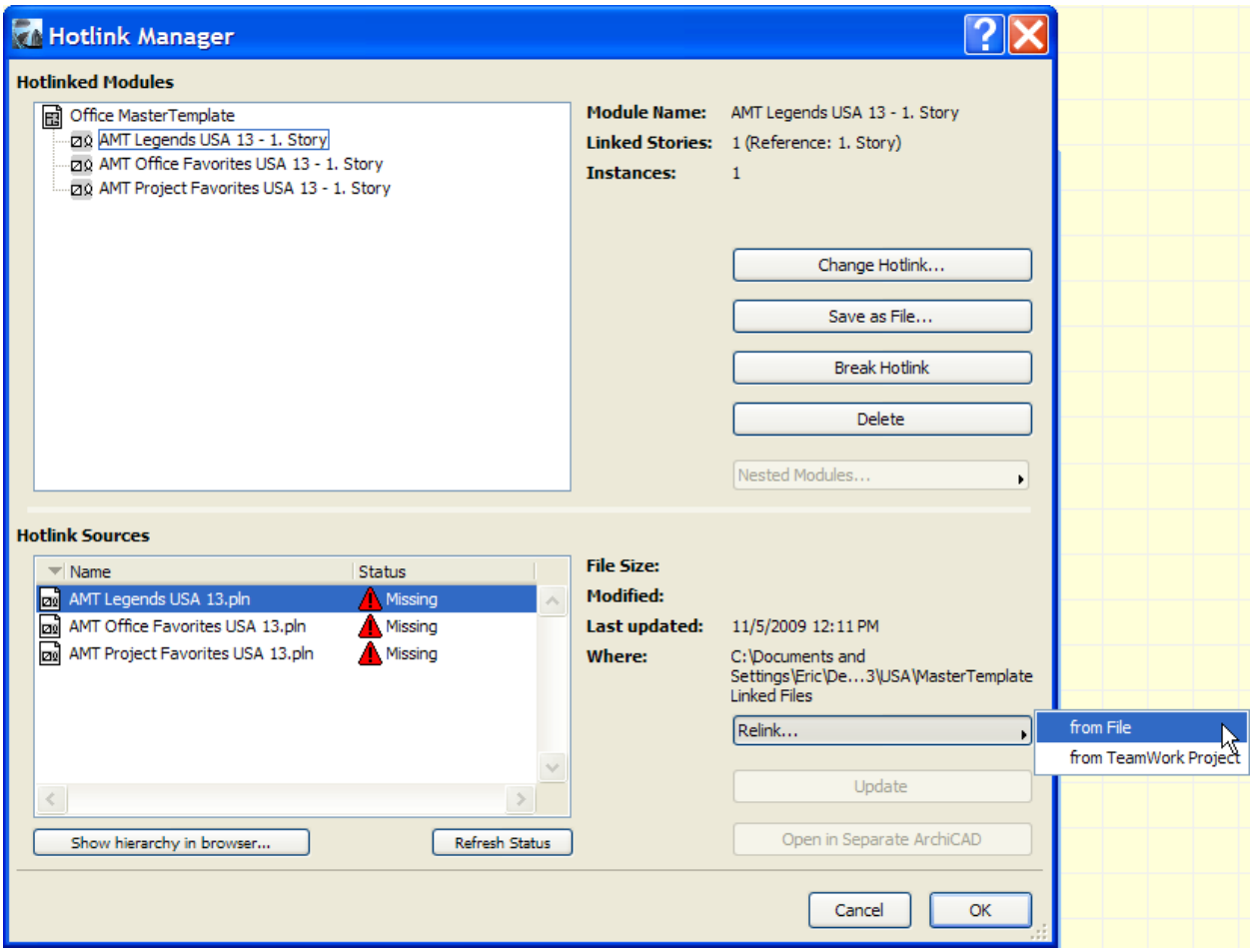
You can ALWAYS ignore this message (press Skip All) for any ArchiCAD file, UNLESS you intend to immediately print out drawings. It simply is telling you that some of the Drawings in the project (on the Layout sheets or elsewhere) have not been checked and may not be up to date. If you click Update All, it will take a long time, and it's absolutely not necessary UNLESS you are about to print or plot. If you wish, you may check the "Do not Display this dialog Next Time" to avoid seeing this message.

> **TIP:** You may Update All the Drawings at any time (particularly just before you're going to print out a drawing set or send out some DWG or PDF files) by going to the File menu > External Content > Drawing Manager, selecting all the Drawings, and clicking the Update button.

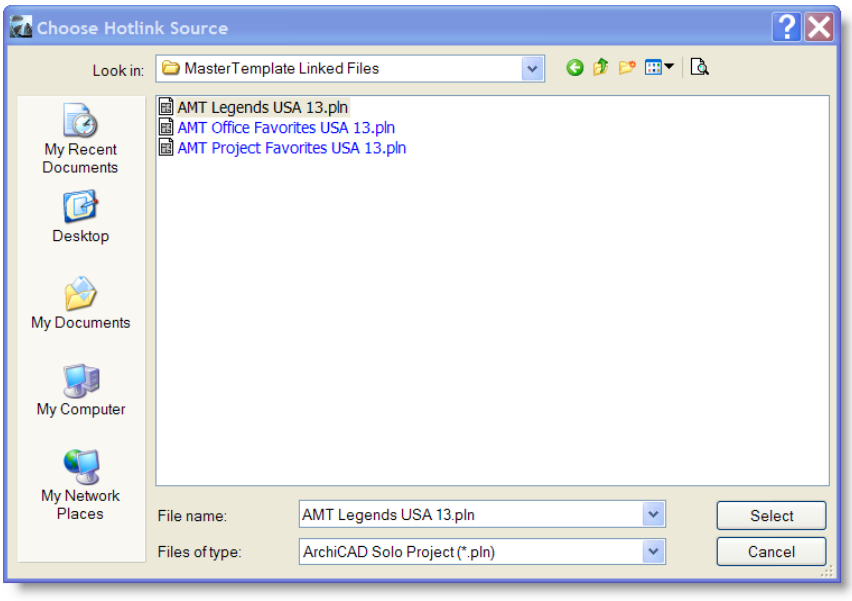
To clean up the missing Hotlinked Modules warning, after you finish opening AMT, go to the File menu and select External Content > Hotlink Manager.



Click on the AMT Legends file (the first one in the list). Then select Relink…from File:

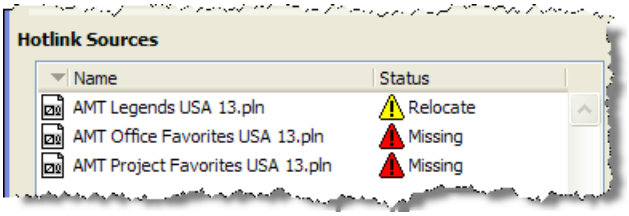


Then in the dialog box, navigate to the AMT folder, select the AMT Linked Files folder and find the corresponding AMT Legends file:

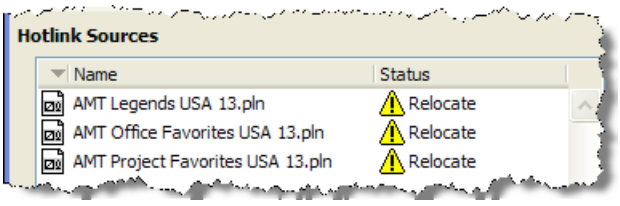


TIP: If you have recently been using MOD files for Hotlinked Modules in a project, the “Files of type” popup may be set for “ArchiCAD Module File (*.mod); in this case you’ll need to manually change the popup to “ArchiCAD Solo Project (*.pln) as you see above.

Click the Select button, and you’ll return to the Hotlink Manager dialog box and see that the Status of the AMT Legends has changed to Relocate:



Repeat the process for the AMT Office Favorites and the AMT Project Favorites (they are located in the same folder), so that they all have the Relocate status:



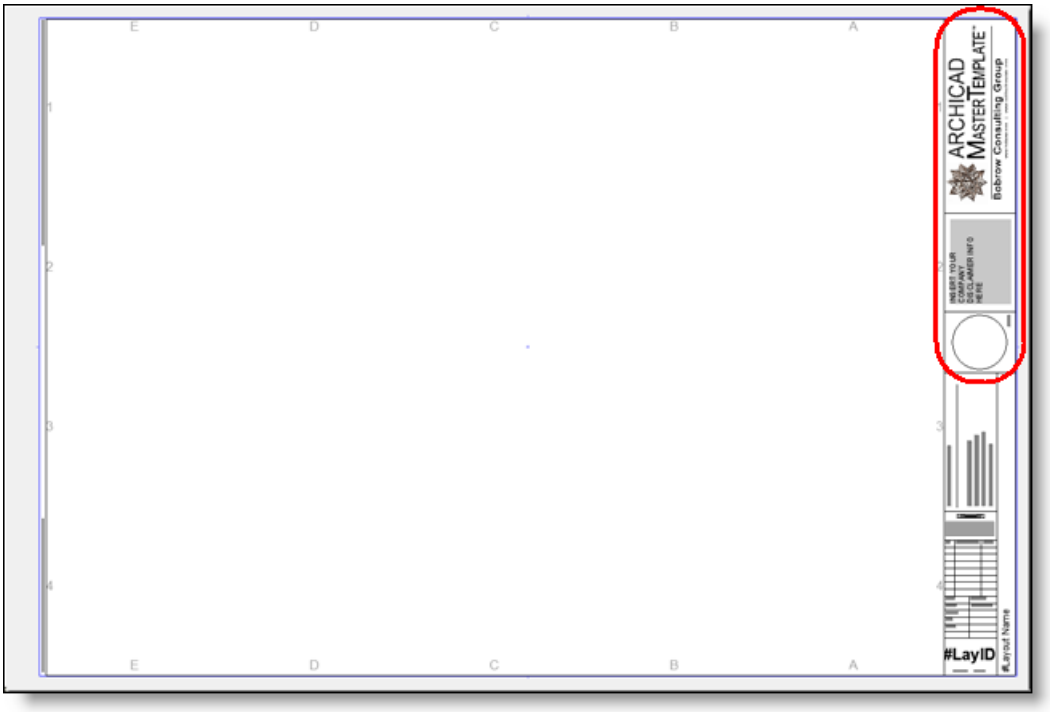
Click the OK button to confirm the changes you have made, and ArchiCAD will then read the Hotlinked Module files to make sure they are up to date. After a few seconds, the process will complete.

Now all the Hotlinked Modules (HLMs) will "know where they live". We'll be exploring these HLMs later on in this manual. You should only have to do this process once, as this will be recorded by ArchiCAD in the template file and in copies made from it.

Save your template file at this point (simply File menu > Save or use the keyboard shortcut), to make sure this information is stored and will not have to be repeated.

ENTER YOUR INFO INTO THE TITLE BLOCK AND THE TITLE SHEET PLACEHOLDERS

AMT contains ‘place holders’ for your company information and other boilerplate text that you will need to fill in. For example, on the Title Block, you’ll see a logo for ArchiCAD MasterTemplate that should be replaced by the appropriate graphics and/or text for your office. Below that, you’ll see a grey text box that is intended to be used for standard disclaimers. There is also a space for a seal which you can “wet stamp” or fill in digitally if you wish.



Systematically go through the various Master Layouts that you intend to use (you can ignore or delete Masters with sheet sizes that are not relevant) and fill in your company information and logo to "make it your own." Once you do this for one Master, you may copy and paste onto other Masters, so this should go quickly. Of course, when you work on Masters of different sizes, you may need to scale the graphics or adjust the spacing in order to fit the layout properly.

To simplify this even further, the MasterTemplate logo is placed on the Master as a Drawing that is linked to a file in the MasterTemplate Linked Files folder. You may simply replace that file with your own graphic, and all the Masters will show your logo graphic as soon as you click the Update button. We have a video tip in the Support section of the MasterTemplate website that shows how this is done: http://www.archicadtemplate.com/support/company-logo/

Importing an Existing Title Block

If you have a complex title block in ArchiCAD or another CAD system, you may prefer to import your old title block into MasterTemplate and integrate it into the Master Layouts.

If it is in ArchiCAD, you can copy it from a previous project in several different ways. The simplest way is to open two instances of ArchiCAD, then select items and copy from the Master of the old project, and paste into your new template Master.

Alternatively, you can use the Project Chooser popup button in the upper left of the Navigator and select Show Organizer. Then use the Project Chooser again in the Organizer and Browse Project… for your existing file. Once its loaded on the left side, you can switch to the Layout Book on the left side of the Organizer, and drag one or more Masters from the old project into your active file (the MasterTemplate).

If your existing title block is in another CAD system, you may place a DWG file as a drawing (File menu > External Content > Place External Drawing…) on either a blank layout or a Master, then explode it (Edit menu > Reshape > Explode).

In either case, carefully delete anything you don't need from your old title block (for example, graphics and Autotext that are already included in the MasterTemplate). Get rid of placeholders or graphics from the Master that you will be replacing. Then move the desired content into position onto the Master.

> **TIP:** For safety, you may want to do your initial editing on a copy of a Master. To copy a Master Layout, drag it into a new position in the Master list while holding down the Control key (PC) or Option key (Mac). To work on the new copy, double-click it in the Master list.
>
> Once you have the Master copy looking the way you like, you may Select All and Copy, then go the original Master, Select All and Delete, then Paste. Delete the Master copy after you verify that the Master is working correctly.

If you update the default Master that is used in MasterTemplate, all Layout sheets that refer to it will update automatically with the new contents. If you create or update other Masters, the contents will be seen when you assign this Master to some or all Layouts. You can change the Master for multiple layouts by selecting the Layouts in the Layout Book list, then clicking the Settings and specifying the new Master in the dialog box.

Boilerplate Placeholders

On the Title Sheet Layout and on some of the other Layouts, placeholders are identified as framed text boxes with grey backgrounds. These may be edited directly on each

specific sheet.

Flip through the actual Layout pages in the template, and anywhere there is a placeholder grey box, fill in whatever you can that you expect will be common from one project to another. Remember that whatever you place into your template will save you time in every project, and will always be editable as needed.

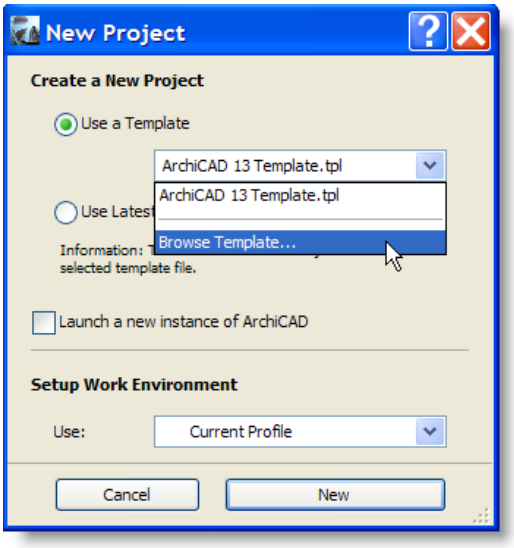
After you have entered all of your office and boilerplate information, it is very important to Save your work. ArchiCAD will automatically overwrite the TPL file with the latest version, as long as you opened it up the way we instructed above.

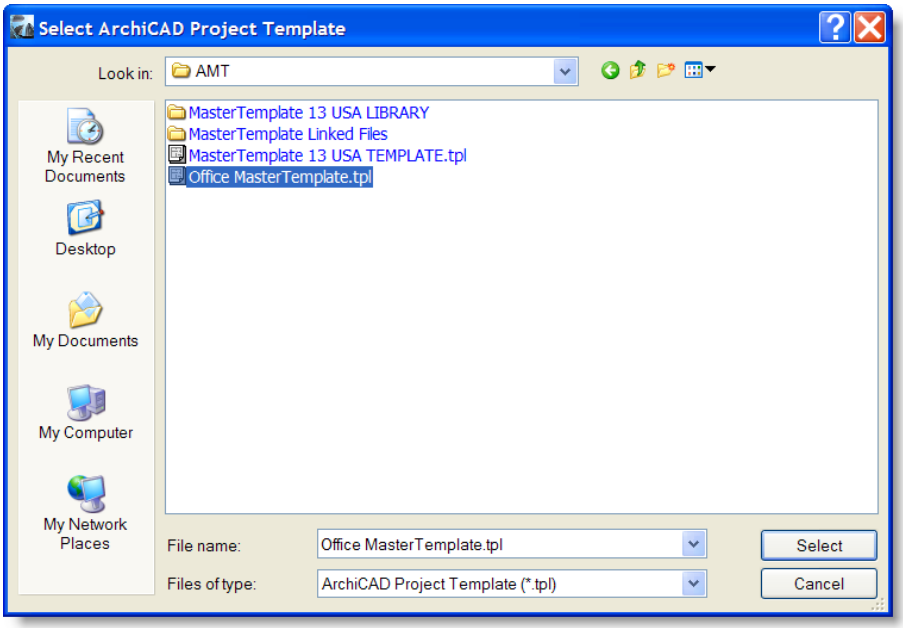
Once you have customized your standard office template you will follow the instructions below to start each new project. If you would like to edit or rework your template, follow the special instructions above to open the Office MasterTemplate.tpl file for revisions.

STARTING YOUR OWN PROJECTS

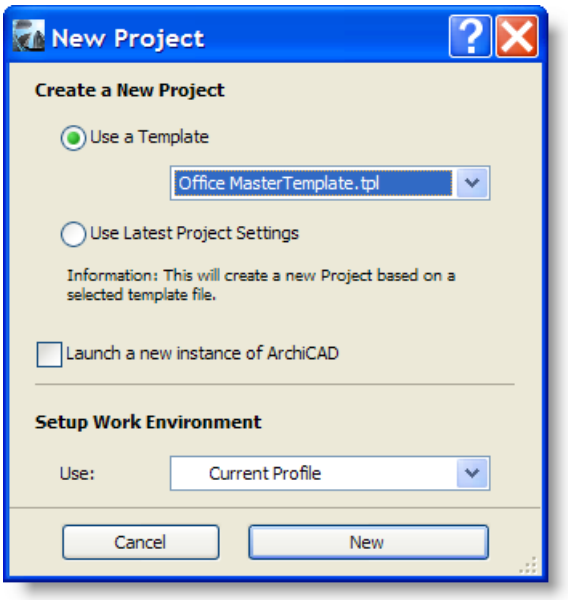
A NEW PROJECT USING MASTERTEMPLATE

Start up ArchiCAD and choose New File / Use a Template; or if ArchiCAD is already running, choose File menu / New… then specify Use a Template. The first time, you'll need to browse for your **Office MasterTemplate.TPL**, the one you have modified to include your office standards.



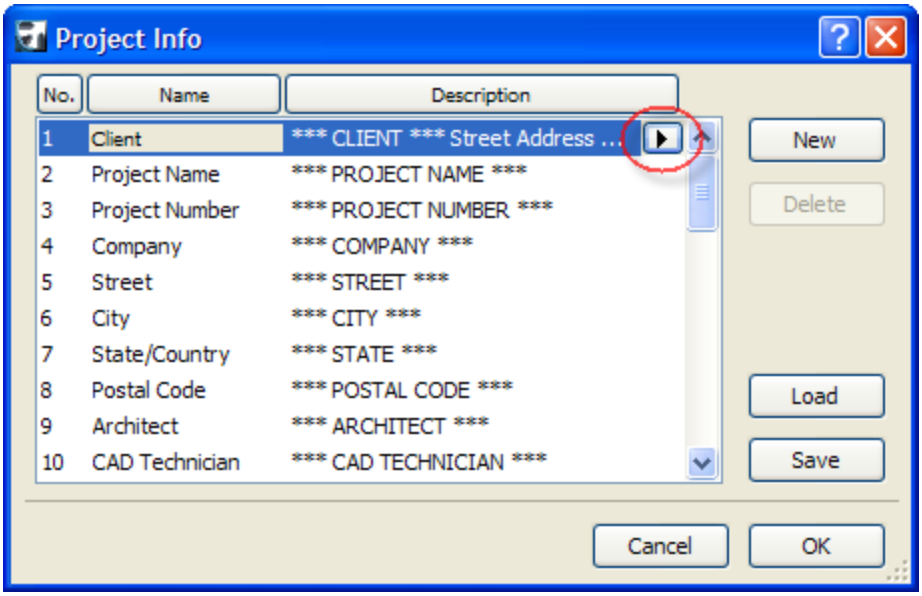


Any subsequent time, it will be simpler: you will see its name highlighted in the recent Templates popup list.



FILLING IN PROJECT INFO

After you start each project, you will want to go through the File menu > Info > Project Info and fill in whatever fields you can:



Press down on the triangle to popup a text entry area which supports multiple lines. Remove the asterisks (***), which are included simply to make it easier to see which fields have not yet been entered.

Some entries may not be known yet, or not be appropriate to this project, and you may leave them unchanged. You can return here to fill in this info at any time, and it will update on the Title Block and on the Title Sheet.

The file will initially be labeled ‘Untitled’, and require you to ‘Save As’ with your desired project name. **Make sure when you "Save As" to choose PLN format** (ArchiCAD Solo Project), and name as desired (e.g. **07123 SMITH HOUSE.PLN**). Save the PLN into its own project folder (e.g. **07123 SMITH**) inside your Jobs folder.

> **TIP:** The ArchiCAD MasterTemplate folder contains a sample MasterTemplate NEW PROJECT FOLDER. This folder has many subfolders ready to hold typical project information. Look in the **PROJECT FOLDER** section later in this manual for more guidance on its use and customization.

STARTING THE DESIGN PROCESS

You are now ready to begin laying out your building or site. Be sure to review and adjust the number of stories and floor-to-floor elevations as needed. This can be done in the Story Settings Dialog Box under the Design Menu. See the manual section for **SEA LEVEL OR PROJECT LEVEL** for guidance on how to move the building elevations in the Story Settings to match actual survey elevation data if desired.

Construct the model and site as you normally would. You will have to adjust the locations of the pre-placed section and elevation markers.

There are two pre-drawn slabs in MasterTemplate that represent in a simple way the adjacent exterior grade. You may need to adjust its vertical elevation to account for the relative relationship between grade and the first story level or project zero. You can also discard these slabs and replace it with one or more Mesh and/or Slab elements when you are ready to represent topography in a more detailed manner.

Depending on the size of your building, additional adjustments may be required for the boundaries and locations of the pre-placed drawings in the Layout Book.

STEPS TO MASTERY

INTEGRATING MASTERTEMPLATE INTO YOUR OFFICE

This template is set up so that when used correctly, Views of your model will be automatically generated. Many of these are preplaced as Drawings on predefined Layout Sheets, often requiring only slight repositioning to be ready for output.

Using the template correctly entails proper project setup, accurate modeling, and most importantly, making sure entities or elements are placed on appropriate layers. As an example, if you place an exterior wall on a layer intended to receive a roof, the wall will not display correctly, and the resulting Views will misrepresent the desired outcome. Therefore it is critical that careful attention is paid to which layers modeling and annotation items are placed upon.

Layer Combinations and Layer Names have been carefully pre-set to achieve this, however occasion may arise where slight modifications to either of the mentioned Layer controls are necessary. Layer Combinations must be properly updated following standard procedure when new Layers have been added, or existing Layer names are changed.

> **TIP:** If you add a new Layer to your template or a project file, select the added Layer in the right side column of the Layer Settings dialog box, then start at the top of the Layer Combination list on the left hand side and set the visibility, mode, interaction and locking attributes for each Layer Combination. When completed, click OK to save your updated settings.

One important issue to be aware of is file contamination. This generally occurs when elements are copied from legacy projects (prior to using the MasterTemplate), and pasted into the MasterTemplate. For example, there may be a well designed window system that exists in an earlier project, with the complex set of parameters already defined. The instinctive move is to copy the wall containing the window and paste it into the new project. The issue with this is that all attributes attached to those elements will be pasted in as well, including line types, materials, fills and layers.

When a user desires to paste in an item from a different file, it is recommended that those items either be placed onto a layer that also exists in the destination file, or as an alternate, first copy or move the item onto the ArchiCAD Layer, then copy and paste it into the new project, after which the items are moved onto the correct layers. Setting fills and materials to match those in the destination file is also beneficial, however this may not always be practical.

HOW TO TAKE AN EXISTING PLAN AND MIGRATE IT TO THE MASTERTEMPLATE SYSTEM

There are two main tasks to accomplish when migrating an existing project into your new office standard template. The first one is to synchronize the layers in the project to match those in the template. The second is to copy the information (the building and annotation) from the existing project file into the new one based on the template.

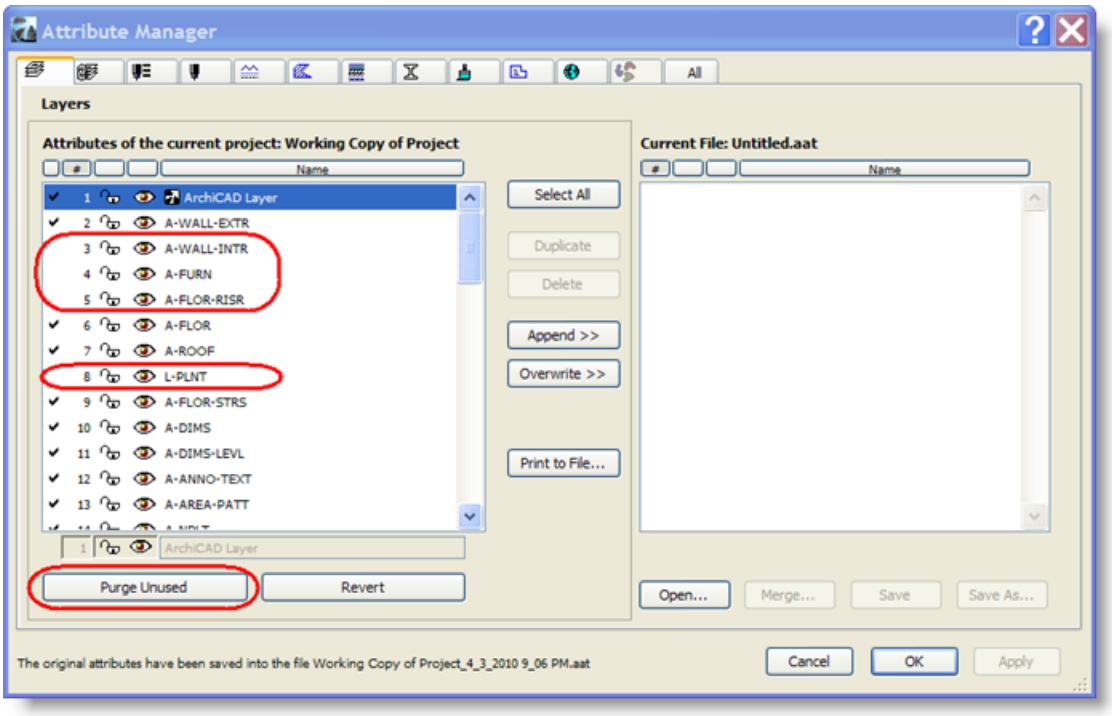
Migrating a PLN file is straightforward when the project is relatively early in development. In the simplest scenario, there is a 3D model with annotation on the floor plans, but nothing else developed beyond what ArchiCAD generates automatically in sections and elevations. Migration gets more complex as 2D work is done in sections and elevations, markers are placed for detail drawings, and details and worksheets are created. It is always possible to migrate a project into a template, but at a certain point, the effort may not be worth it.

> **TIP:** We suggest that before doing major surgery on your file, you save all your current work, and then Save As a “working copy” of the PLN under a new name. In case you do something wrong, you can always go back to the previously saved version.

Synchronizing Layers

The best way to synchronize layers is to go through the layers you have used in your existing project, and rename them carefully to match the names in the template.

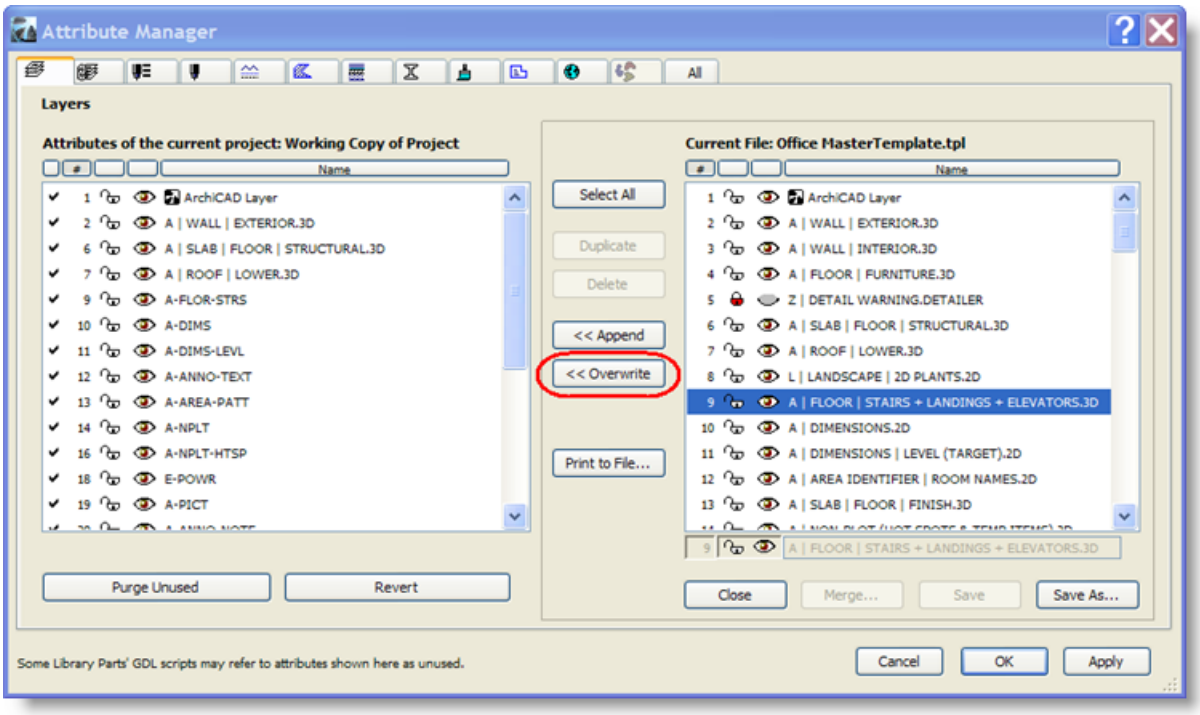
To reduce your work to the minimum, in your “working copy” of the project file, get rid of the layers you have not used in your project file. Open Attribute Manager (Options menu > Element Attributes > Attribute Manager) and select the Layers tab in the top left to see the Layers in the current file. Note that layers that currently have elements placed on them will have a check (“in use”) while unchecked layers are currently empty of content.



Click the Purge Unused button at the bottom of the Attribute Manager. That way you may have only 10 or 20 layers to rename, rather than 50 or more.

> **TIP:** We don’t suggest you do this on a project normally, since you will eliminate layers that you may need to use later on in the project lifecycle.

Next, click the Open… button on the bottom right of Attribute Manager and select a copy of your office MasterTemplate file. You will see the Layers in the template listed on the right hand side. If you have the lists sorted by Index number (you may need to click the # icon button to sort the list using that column), you may notice that the names of layers correspond in many cases. For example, Layer 1 in the standard USA template is called A-WALL-EXTR, while in MasterTemplate it is called A | WALL | EXTERIOR.3D.



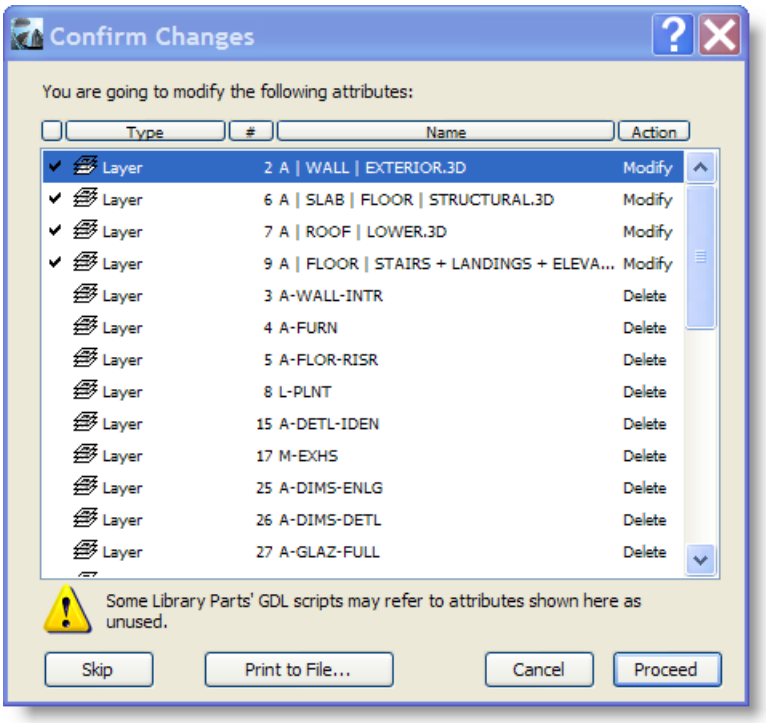
Wherever there is a match, you may simply select the layer on the right-hand side (from MasterTemplate) and click the <<Overwrite button. In the screen-capture above, you will see that layers 2, 6 and 7 have already been done using this method, and their names on the left side are now based on MasterTemplate conventions.

Layer 9 is highlighted and about to be copied over. The layers with this index number correspond nicely (i.e. A | FLOOR | STAIRS + LANDINGS + ELEVATORS.3D is a good match for A-FLOR-STRS). Simply clicking the <<Overwrite button will match the layer name.

The reason why many of these names will match nicely is that when we created MasterTemplate, we did the inverse: we changed the name of each layer to suit our new standard convention. So, for “standard” layers in the USA template, and many in the International template, the layers will match but of course have different names that need to be reconciled using this process.

However, it is likely that there are some layers that do not match properly by index number. In that case, using the <<Overwrite button will cause some confusion, since elements placed on that particular layer will now be on a layer that has a name indicating a different purpose or usage. In this case, it may be best to manually rename the layer to match a suitable MasterTemplate layer (including the layer extension, which is seen following the dot or period - e.g. “.3D”) so that these elements come into the template already sorted properly.

When you have renamed all the layers in use to match MasterTemplate naming conventions, click the OK button and ArchiCAD will give you a short report of the pending changes (the deletions of unused layers, as well as the modification of the layer naming), and request your confirmation to Proceed:


Confirm Changes
You are going to modify the following attributes:
Type
#
Name
Action
Layer 2 A | WALL | EXTERIOR.3D Modify
Layer 6 A | SLAB | FLOOR | STRUCTURAL.3D Modify
Layer 7 A | ROOF | LOWER.3D Modify
Layer 9 A | FLOOR | STAIRS + LANDINGS + ELEVA... Modify
Layer 3 A-WALL-INTR Delete
Layer 4 A-FURN Delete
Layer 5 A-FLOR-RISR Delete
Layer 8 L-PLNT Delete
Layer 15 A-DETL-IDEN Delete
Layer 17 M-EXHS Delete
Layer 25 A-DIMS-ENLG Delete
Layer 26 A-DIMS-DETL Delete
Layer 27 A-GLAZ-FULL Delete
Some Library Parts' GDL scripts may refer to attributes shown here as unused.
Skip
Print to File...
Cancel
Proceed

Copying the Model into Your New File

At this point you may bring the floor plan and 3D project information into the destination file without fear of disturbing the layers, layer combinations and Views.

In the simple case, you've worked on the 3D model and done annotation only on the floor plans. You may then simply copy and paste from the original project PLN file into the destination PLN.

> **TIP:** It is often convenient to delete the Elevation markers before copying from the source file to avoid duplicates in the new MasterTemplate-based file. Do NOT do this if you have placed a significant amount of annotation in the Elevations, since you will lose access to this data if you delete the markers. You may delete Section markers as well if you have not done any 2D work in them, and you know you can place them again easily.

It’s simplest to have both source and destination files open at the same time. Create a new file based on your office MasterTemplate, using the option to start a new instance

of ArchiCAD so you can keep the source file open too.

In the new file, before pasting in the model, it's important to adjust the Story Settings in this new file to match the original project settings. You can refer back and forth between the two instances of ArchiCAD to make sure the names and heights of the stories match properly.

In your source file (the working copy of the original PLN file which has had the layers purged and renamed), turn on and unlock all layers, draw a heavy marquee (the option that references all stories) around the building and site and select the Edit menu > Copy command or use a keyboard shortcut.

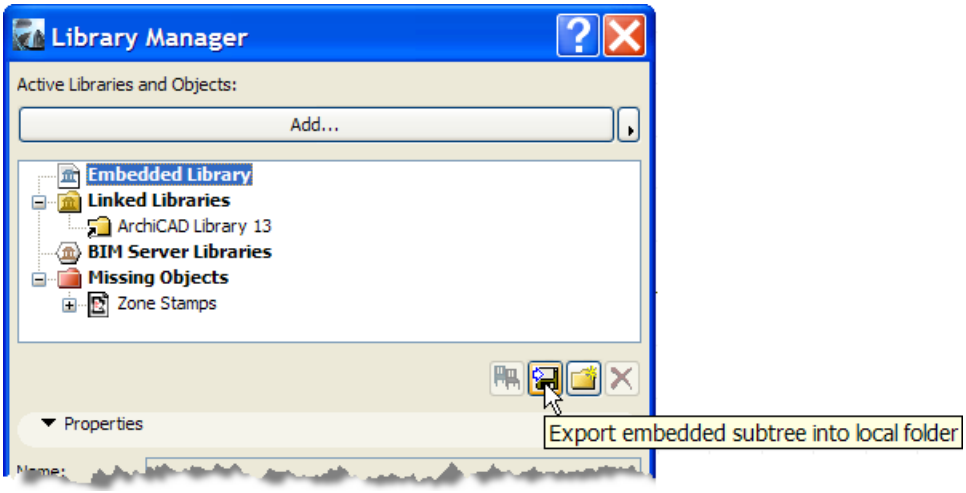
Switch to your new template-based destination file, go to the corresponding story, and Paste. When asked, confirm which story of the source file matches the story you currently have open in the destination file. You may adjust the Paste marquee to move the building into a good position relative to the existing template setup, or use the Paste into Original Position if needed to correspond with external reference files such as surveys.

Once you've pasted in the plan information (the model, annotation and markers), you may need to adjust the elevation and section markers. If there are duplicate markers (e.g. you had elevation markers in your original PLN that came in from the paste), carefully choose which markers to delete. You may delete the ones from your original PLN, and move the template-based destination file markers into proper position, so their Drawings already placed on Layouts will show the new model. Or alternatively, you may delete the pre-placed destination file markers, and later go to the Drawings on the Layout sheets and using the Drawing Manager, relink them to the appropriate source marker.

If you had annotated your original Elevation or Sections, or created Details or Worksheets, this work will have to be recreated, or copied and pasted manually from the original PLN to the corresponding View in the destination file. In sections and elevations, be careful not to copy 3D elements, as they will paste into the destination section or elevation as 2D linework, causing unnecessary duplication and possible confusion. To copy 2D elements only, you can use Edit menu > Find and Select and choose 2D Elements from the topmost criteria.

> **TIP:** Be sure to use the option when pasting to "Place Elements in Original Location" to make sure that everything lines up the way it should.

If necessary, load any libraries that were used with the source file including specific project libraries. If you had Embedded Library Parts, you may save them into a folder on your hard drive by using the Library Manager button “Export embedded subtree into Local Folder”:



In your new file, you may load these exported library parts as a Linked Library folder, or embed them again inside the project.

Materials and fills may differ between the source and destination files and should be checked for consistency by reviewing the file in 2D and 3D to see if everything looks correct.

Here's why there may sometimes be an issue: in the simple case, when Fills or Materials in the originating file do not exist in the destination file, and elements referencing those Fills or Materials are pasted in, the definition of each Fill or Material will be added correctly to the destination file.

However, if a Fill or Material name exists in both files, the definition will not be modified in the destination file. For example, if a material called "Default Wall Material" is blue in the originating file, and grey in the destination file, walls that were originally blue will become grey when pasted in.

In that case, you will need to either overwrite the destination attribute with the one(s) from the originating file, or recreate them manually. You can overwrite Fill or Material definitions in the destination file using Attribute Manager. On the right side of this dialog box, select and open the source file. Select and highlight any Materials or Fills that need updating in the file on the right side, and click the Overwrite button to modify those on the left side.

> **NOTE:** If the Fills with the same name have different index numbers, then this will not work - it will instead overwrite another Fill with the same number. In that relatively rare case, you'll have to manually recreate the Fill or Material instead of using Attribute Manager.

If some Layouts or Masters have been developed in the source file, these can be

brought into the destination file using the Project Chooser. In the destination file, select from the Project Chooser popup (by pressing the button at the top left-hand side of the Navigator palette) Show Organizer. This will open up a double-wide version of the Navigator. Press down again on the Project Chooser button, and this time select the source project, which will be in the list of "running" projects if you have been actively copying information from it.

On the top left-hand side of the Organizer, choose the Layout Book option. You'll then see the Layouts and Masters of the originating file, and can drag these to the right-hand side to copy them into the current file's Layout Book.

Executive Summary

To import an existing model (3D and floor plan elements only) into a template:

- Make sure the story settings in the destination template file match those in the source file. Load any libraries that were used with the source file including specific project libraries.
- Delete the modeling slabs in the destination template file, as the source will likely have its own base or mesh.
- It is best to synchronize layer naming between the two files, by renaming all layers in use in the source file to match corresponding layers in the destination template-based file. (If layer names are present in the source file that are not in the destination file, these layer names will be added when elements are pasted in, however they will not be correctly managed by the layer combinations. Combinations would require updating to address this.)
- In the source file, turn on and unlock all layers with information that should be transferred, then draw a multi-story marquee around entire model. Copy, then switch to the destination template-based file. Make sure you are on the same story as that which was used during the Copy operation. Paste and confirm the corresponding story relationship between the two files.

  For simplicity, place the pasted model in the center of the canvas area so that the already placed view port markers will function properly. Alternatively, if placement of your project relates to DWG survey coordinates, it may be appropriate to paste into the Original Position, then move any pre-placed markers as needed.
- Note that section, elevation, interior elevation and detail markers are brought in, and will appear in the correct Clone Folders in the View Map, however they will not appear on the Layout sheets. Placed drawings (on the Layout sheets) can be relinked to these markers at a convenient time. For each pre-placed Drawing, right-click (in the Layout Book, on a Layout sheet or in the Drawing Manager) and select the Link Drawing to… command. Alternatively, you may place these Views fresh onto Layouts in the traditional manner.
- Materials and fills may differ in some cases, and should be checked for consistency.
- Note: any annotations or manually drawn 2D elements in section or elevation viewports will not come into the new merged plan during this operation. You would have to go to each View in the source file and use Find and Select to choose 2D Elements, and Copy, then go to the corresponding View in the destination file and Paste (making sure to choose "Paste Into Original Position").

CREATING A NEW OFFICE TEMPLATE FROM A MODIFIED MASTERTEMPLATE

Process for setting up a new template file based on a completed project.

One way to create an office standard template is to take a project that has been partially developed or fully completed, and remove the building geometry and the annotations specific to the building, leaving intact the structure and attributes. The advantage of this approach is that customization to meet existing graphic standards can be done over a period of time on a real project. It can be tested and revised until satisfactory; and only at that point be converted into a standard template.

We have developed an optimized approach for how to remove the building and annotations from a project PLN file to create a new TPL template file. The steps are based on the assumption that the project PLN started from the original MasterTemplate or a template derived from it.

- Create a copy of the source project file, then use that copy to complete the process below.
- In the Layer settings dialog box or in the Quick Options palette, select the Layer Combination '* DELETE MODEL'. (Note: This layer combination locks certain visible layers so that important template elements on those layers cannot accidentally be deleted).
- Use the Project Map for the next steps:
- Starting on the lowest story, use the Arrow Tool then Select All (Control-A or Command-A), and delete these elements by using the Delete key.
- Separately delete all Interior Elevation Marks, with the exception of one, so that the settings can be preserved. You may have use the Layer Settings dialog to manually Unlock the Interior Elevation Mark Layer temporarily to allow this, but after deleting all but one mark, re-select the '* DELETE MODEL' layer again.
- Repeat step b for each story going up.
- Using the Project Map, select each Section and Elevation one at a time, and move any remaining 2D elements to the side into a temporary holding area. Delete items that are repeated in this holding area as they are not necessary. You may wish to draw temporary polyline boxes in these windows as holders for Fit to Drawing placed drawings on Layouts. An alternate to this would be to have Story Lines set to display and print, which will then occupy space in the empty drawings.

- Using the Project Map, repeat the same for Worksheets and Detail windows.
- Using the Drawing Manager, select all drawings and set to Fit Frame to Drawing, then Update All Drawings.
- Open each Layout Sheet and reposition any and all drawings as well as deleting or modifying other items placed onto those sheets as required.
- Finally, modify the Autotext source information in the File Menu > Info > Project Information. You may also use the Save button in the Project Info of another template file to create an XML file, then use the Load button to bring it into this template.
- Save as a new Template file by selecting File > Save As, then in the “Save As Type” dropdown menu select 'ArchiCAD Project Template (*.tpl), and give it a meaningful path and name.
- When starting your next new project, commence by opening this new template file from the File menu > New / Use Template dialog.

REMODEL PROJECTS: SETUP & STRATEGY

CONCEPTS AND PROCEDURES FOR SETTING UP AND MANAGING REMODEL PROJECTS

Remodel projects do not necessarily require separate layers for existing and new elements. In fact, we recommend not using any layers for existing or new conditions as described below. This keeps in line with our preference for less layers, making project management easier with better work flow. Instead, two separate PLN files are established (described below) using the compact list of MasterTemplate layers.

Additionally, it is recommended that entity ID naming should include the characters N for new and E for existing as part of their ID if this data is required to be listed or scheduled.

> **SIDE NOTE:** Additional layers for alternate design schemes can temporarily exist for the purposes of comparison during the design phases, however entities placed on those temporary layers shall be moved to their appropriate layer after the final design is solidified.

Analysis

One approach commonly used is to create an unlinked model representing the existing conditions. A copy of that file serves as the basis for a separate addition / remodel file.

Although this approach is simple to understand and implement, there are several disadvantages. As the course of work evolves on the project, new information may come to light that would affect both the existing PLN as well as the addition remodel PLN. In this case, the new information then has to be placed in both the existing as well as the addition remodel file, and there is a chance for error, omission or conflict.

Another issue with this approach is that more layers could be required, affecting work flow and management. Finally, there is a real possibility that existing entities within the Addition / Remodel PLN may accidentally be deleted or repositioned in a way that their original or correct position can not easily be verified.

These concerns are substantially mitigated when the As-Built / Existing PLN is hot linked into the Addition / Remodel PLN. The new method outlined below maintains an

updatable link from the As-Built / Existing PLN to the Addition / Remodel PLN, eliminating the possibility of conflicts between existing and new components. It also eliminates the need to have separate layers for new or existing items, facilitating better project control, work flow and management.

Explanation of the Hot Linked Method for Addition / Remodel Projects

Set up your Addition / Remodel project using two separate PLN files. The first or Source file functions as the As Built / Existing building model, with the second being the Destination Addition / Remodel Master file. The Addition / Remodel Master Destination file will contain both a placed Hotlink Module created from the Source As-Built Existing PLN as well as added elements like newly added walls, etc.

The As-Built Existing PLN file that is used to create a Hot Linked Module can be periodically updated as additional information becomes available throughout the building survey process. For instance, an ArchiCAD model of the existing field conditions can be commenced based on initial field measurements, and further refined later as more detailed information is obtained. It is not uncommon for some building survey information to be missing or unavailable at the time the remodel concept design starts to be developed, and this approach allows gradual refinement of the as-built model while redesign is in process.

By separating the As-Built / Existing PLN from the Addition / Remodel Master PLN, the As-Built Existing PLN can stand alone as an accurate record of the existing field conditions, and can easily be up-dated over time. Because the Hot Linked Module within the Destination Addition / Remodel Master PLN is hot linked to the As-Built / Existing Source PLN, it will always remain current with that As-Built / Existing PLN.

This contrasts with the method that places all of the existing and addition / remodel information within one PLN. That approach requires adding many more layers, with a possible adverse affect on work flow. Further, the accuracy of the original building survey could be compromised as work on the model progresses.

With the stand alone method as described above, the As Built / Existing Source PLN can always be independently checked for accuracy and used with a high degree of confidence in its accuracy. It is not cluttered or combined with additional elements.

In commencing the Source As-Built / Existing PLN, all existing items are simply placed on their appropriate layers. For instance, an existing exterior wall will be placed on the A | WALL | EXTERIOR.3D layer, and so on. Modeling the existing conditions continues to a point when the architect / designer would like to initiate a new model representing the addition / remodel.

Prior to creating the new second file, the user shall select a layer combination (perhaps * MODULE EXISTING) which shows the completed model for export as the Existing Module. (Note: the A | DEMOLITION.3D layer can be included in this layer combination, but this layer must be managed carefully to avoid element interaction issues relating to demolition items in the new design).

At this point there are two alternate methods for saving as a Hot Linked Module (HLM), with the preferred as follows: With the As-Built / Existing model visible in plan view, surround it completely using the multi-story marquee, and select Copy from the Edit menu. Then in the menu bar select File > Save As, then in the Save As dialog box under Save As Type, choose 'Module File from Clipboard (*,MOD). Give it a name and select Save.

The second method uses the same copy steps outlined above, but instead is saved as follows: in the menu bar select File > External Content > Save Selection As Module. Here the user needs to make sure the 'Replace Selection with this Hotlinked Module File' checkbox remains un-checked.

> **TIP:** You may place a polyline around the entire model to help get the Marquee set up each time very quickly. With the Marquee tool active in multi-story mode (thick marquee line), Space-Click the polyline, which will trace it with the Magic Wand. The polyline should be placed on the A | NON-PLOT layer, but be visible in the MODULE Layer Combination.

The next step is to create a new file that will contain this HLM produced from the As-Built / Existing PLN as well as new items representing the addition. Items to be demolished are placed onto the A | DEMOLITION.3D layer in the As-Built Existing PLN, and visibility of these demo items are controlled by layer combinations in the new plan.

In the course of the design phase of the project, a wall or portion thereof may be required to be shown as demolished. In that instance, that wall will be moved from A | WALL | EXTERIOR.3D onto the A | DEMOLITION.3D layer within the As-Built / Existing PLN. The As-Built / Existing model will appear unchanged when the A | DEMOLITION.3D layer is visible. It should be noted that there one needs to go back and forth periodically between the As-Built / Existing and the Addition / Remodel PLN files to accomplish these tasks.

Demolition items are controlled within the As-Built / Existing PLN, and are included in the new PLN via the HLM. Because Demolition items are all on one layer, they are easily isolated for graphic manipulation within a Demolition Worksheet.

The Demolition drawings are created by copying the elements from each story (after manually turning on the A | DEMOLITION.3D Layer) and pasting them into a new Worksheet. While pasting, the entities are automatically exploded into their primitives,

but they maintain their respective layers.

Next, isolate the Demolition layer (turn off all other layers, perhaps using the QuickLayers palette command to Hide Others Layers), then select all the elements in the Worksheet and modify these primitives graphically to represent demolished items. Often these are shown with dashed lines and fills; your office standards may be different.

Wall composites or types used in representing new and existing to remain will be identical, with the exception of the background fill pen of the core. For the existing to remain condition, the background fill pen can be either set to transparent or white, while walls for new construction can have the background fill pen set to a traditional poche color, like light blue.

For the purposes of auditing or scheduling data, existing to remain, existing to be demolished and new entities will be accomplished through the use of the entity's ID. Therefore, entity placement on a particular layer only affects visibility, and is not solely required for cataloging of information. Again, fewer layers promotes better work flow.

It should be noted that if you wish or have the need to isolate addition or new elements within the Addition / Remodel Master PLN, that is easily achieved by selecting all new entities and saving them as a module. The visibility of this new module will be controlled by one single new layer A | MASTER-MODULE (BLDG. ADDITION).* MOD.

This option gives the user the ability to quickly illustrate the scope of new work compared to existing from within one file. However this approach creates additional work that may not be necessary in many cases.

> **TIP:** for the Existing PLN model, where certain conditions require wall trimming, it is recommended to trim those walls to roofs rather than use Solid Element Operations in adjusting the wall height. That way Operators do not have to be included in the exported Module file.

Separately note that new entities within the Addition / Remodel PLN are able to be modified by Existing Module entities through Solid Element Operations.

QUICK GUIDE TO REMODEL PROJECTS

Two PLN files are used, one for the existing building model, and the second that includes a Hot Linked Module to the first, as well as the new addition elements. The main purpose of this approach is to significantly reduce the number of layers, thereby simplifying control and workflow.

Project Setup

1. Create a new project file (PLN) using the ArchiCAD MasterTemplate.

2. Model the existing building.

3. Save a module (MOD) file using the save selection method (multi-story marquee).

4. Create a second new project file (PLN) using the ArchiCAD MasterTemplate.

5. In the second PLN, create a new layer called * MASTER MODULE | EXISTING.*MOD.

6. In the second PLN, place the module file created in step 3 above. Use the layer created in step 5 above as the Master Layer to control visibility of that ‘Existing Building’ Hot Linked Module.

7. In many cases you may skip step 5 to avoid creating a new layer. Use either the * MASTER MODULE | BUILDING.*MOD or * MASTER MODULE | OTHER.*MOD layers, if you are not using them with other HLM files.

Project Development

NEW ITEMS:

- In the second file, model the addition by adding new elements to the existing Hot Linked Module.

- Tip: for new 3D construction elements, alter the background fill pen such that they stand out when next to existing elements.

DEMO ITEMS:

- Identify elements or portions thereof that need to be demolished as a result of the new design. (Note: demolition items are manipulated from the Existing PLN).
- Open the original Existing Building PLN file, place those items to be demolished on the A | DEMOLITION.3D layer.
- Tip: when precisely defining alignment of demolition items with new, temporarily paste new entities from the Addition PLN into the Existing PLN, line up the entities to be demolished in the Existing PLN, then delete the pasted new items.
- Overwrite the original module file from the revised Existing Building PLN, which now includes elements placed onto the A | DEMOLITION.3D layer.
- Back in the Addition PLN (second file), update the Existing Building MOD.
- The demolition items are now easily controlled by the A | DEMOLITION.3D. (Tip: make sure layer combinations are updated so that the demolition layer does not interact with elements on other layers).

DEMOLITION PLAN:

- The demolition plan is created in a Worksheet in the Existing Building PLN.
- Single story marquee and copy the first story that will require a demolition plan.
- Create a new Independent Worksheet and paste (Note: entities are now converted into 2D).
- Make all layers invisible except the A | DEMOLITION.3D layer (Note: this will isolate all items to be demolished).
- Change fills and line types in these remaining elements to represent demolition items per your office standards.

Summary

The Existing Building PLN is used to create Views of the existing and demolition conditions. Those views are imported into Layout Sheets contained in the Addition PLN file. The Existing Building file can easily be updated should new information come to light, or altered with respect to demolition items as the design evolves.

The Master Addition PLN contains a Hot Linked Module to the Existing Building MOD. Any changes to the Existing Building PLN can be updated in the Master Addition PLN file, keeping the project current with changes shown in the Existing Building PLN file.

At this point the following representations or Views are available: the existing building, a

demolition plan for the existing building, and the remodeled building showing new elements seamlessly placed onto the existing building.

Finally, should there be an additional requirement to control new elements separately from existing in the Master Addition PLN, that is easily handled by placing those addition elements as a new module, controlled by a new layer * A | MASTER-MODULE (ADDITION).3D. In this case, all combinations of new and existing can be controlled from within one file, however this is additional work that may not be necessary.

Using this approach, layers are kept to a minimum with new, existing to remain and demolition items controlled by two module layers. As a result, there is no need to have individual layers for each existing and new entities with a longer layer list to manage.

Another important concept with this method, a stand-alone file documenting the existing building model is separately maintained and easily updated. This file is not cluttered with addition entities, and can easily be checked for accuracy.

Addition remodel projects have often been done using a separate file for the existing conditions, but commonly that file was unlinked. After commencing documentation of the field conditions, uncovered or unknown conditions sometimes come to light requiring altering the existing model. In that case, changes would be required of both the Existing Building PLN as well as the New PLN. This will not be the case in the method outlined above as alterations made to the Existing PLN will be reflected in the Master Addition PLN via the Hot Linked connection.

FREQUENTLY ASKED QUESTIONS

Q: Do you break the hotlink in the new addition plan to edit it?

A: No, please do not break the Hot Linked Module in the new Addition file, as that will defeat the entire purpose of this approach. You will edit the Existing PLN to address the new conditions created in the Addition PLN.

There is some back and forth which goes on between the Existing PLN and the Addition PLN. As the addition evolves, you most likely will be required to make adjustments to the Existing PLN file.

For instance, a portion of a wall (in the Existing PLN) may need to become demolished based on the new design (being worked on in the Addition PLN). You will need to accurately know where to cut or slice the existing wall (or element) based on the new wall (or element) placement.

Locating this exact point in the Existing PLN is achieved by copying the new wall (or hotspots, lines, roofs, slabs, etc.) from the Addition PLN and pasting them TEMPORARILY into the Existing PLN. After pasting the new item(s), locate the exact position of the demo items. Slice those existing items and place them onto the A | DEMOLITION.3D layer. After this step you delete the temporarily placed elements from the earlier step described above.

NOW, save the Existing PLN as a Module again AND overwrite the original module file. THEN update this Hot Linked Module back in the Addition PLN. The updated HLM in the Addition PLN will correctly show the existing to remain and demolished items as desired.

> **TIP:** Having both the Addition as well as the Existing PLN files open at the same time is recommended during the periods of adjustment as in the example noted above.

Also, in the Existing PLN, your existing plans will display correctly when the A | DEMOLITION.3D layer is visible (with the exception that there will be residual lines between where the demo items join the existing to remain items). If that is undesirable, please draw over these areas with a white pen to hide the joints. The Existing PLN will exactly represent the existing conditions, even though some of the entities are placed on the A | DEMOLITION.3D layer.

Q: Is the Demo Plan automatically updated as the design changes?

A: The demolition plan on worksheet has been exploded into lines and is no longer auto updated. It has to be manually updated as you work out which walls/etc get demo'ed.

Coordination of the demo drawings can be simplified through the use of Virtual Trace. In the Trace and Reference palette, choose as a reference the Source View (whichever plan view corresponds to this demo plan). You will then see clearly what changes need to be made in the demo drawing to keep it consistent with the latest revisions to the design.

LAYER NAMING, USE & MANAGEMENT

The primary goals and the underlying principles for the layer naming convention used in the Master Template are as follows:

- Provide a list of manageable size to minimize confusion.
- Allow for quick and easy sorting and management of layers.
- Provide meaningful layers, not just a layer for every possible condition.
- Provide a framework for logical expansion, but initially start with as complete a general list possible for most projects.
- Names are explanatory using complete words, not cryptic abbreviations.
- Intuitive usability; when users are faced with placing an entity onto an unspecified layer, they will do so intuitively such that those elements will not be misplaced.
- Provide a visually appealing list that leads the user to logical use.
- Visual consistency with how fills and materials are now represented in their respective lists through the utilization of the vertical separator line.
- The end result is a logical and understandable grouping mechanism to make the workflow more intuitive, while keeping a minimum of layers.

Background

Graphisoft ships ArchiCAD with an abridged set of layers taken from those provided from the National CAD System (NCS) and the Uniform Drawing System (UDS). Those committee-devised layer names were based on two-dimensional drafting systems, and became the primary means for cataloging and displaying drawing information. The layer names use alphanumeric coding and cryptic four character abbreviated names, with (difficult to read) hyphenated sub-sections.

As an example, drawing primitives placed on a layer designated C-SITE-XXXX-YYYY will be seen on the Site Plan and available for graphic display as a civil engineering discipline item. As a result, this system requires significantly more layers in representing subsets of information than necessary in today's BIM environment.

Data management today (for cataloging and auditing purposes) is no longer solely dependent on layers, but instead uses other means, freeing layers to be used for their primary purpose of controlling visibility. Data in the BIM environment may now be sorted

and collected using ID, element type, and other parameter values.

Displaying information in conjunction with workflow is better handled in the new system, as layers (although they contain data) now are primarily used for display purposes. Multiple element types can now appear on the same layer if they are always seen or hidden at the same times. Further, because doors and windows are now a subset of walls (children / parent relationship), those past layers are obsolete.

It should be noted however that there are some circumstances where there can be a requirement to use a more traditional layer naming system. These may be government, institutional or historic preservation projects, where submissions are required to use specific standards. As a result, an alternate layer naming system can be provided that conforms with these special client's requirements.

However, this requirement for use of a standard layer system is the exception and not the norm for most ArchiCAD users. It must be noted that development of new BIM standards is underway by the AIA and other groups, and that will further modify the playing field over the next few years.

In light of the above, we have created a new layer naming (hybrid) system in the ArchiCAD MasterTemplate, which we believe incorporates the best that those earlier systems offered. It includes basic preface coding for sorting and grouping purposes, and categorizes elements in a legible and systematic way.

However our new approach is simpler, more straightforward, and easier to understand and use. It uses fewer layers, and thereby facilitates easier management. Projects should only contain the layers necessary to achieve the desired result. In this case, less is truly more (as long as the system addresses all the project’s conditions).

THE ARCHICAD MASTERTEMPLATE LAYER ORGANIZATION

Overall Structure

In developing the ArchiCAD MasterTemplate layering system, a standard hierarchical categorized system similar to those created by the professional and industry groups noted above was initially chosen for its sorting capabilities, however it was modified to better address the requirements of working in the BIM environment.

The logic went as follows: In considering three-dimensional building elements (site excluded), there are two equally valid approaches; assembly based and tool or surface plane based. The tool-surface plane based approach seemed to be more intuitive and thus was selected and developed for this template (e.g. to draw a ceiling slab, select the slab tool; the layer for this purpose is A | SLAB | CEILING.3D). Also supporting this concept is that floor slabs on the story above will often act as the ceiling for the floor below (in residential construction), so the need to have a separate category grouping for ceilings seemed unnecessary in the context of keeping layer quantities to a minimum.

To keep lists to a minimum, the ArchiCAD MasterTemplate layer combinations lock all layers that are hidden. In doing so, pop-up palettes only display visible layers, thereby limiting the list length, making quicker and more efficient review when scanning the list.

TIP: Set the Work Environment preference “Hide Locked Layers in Popup Palettes”.

The overall Layer naming organization uses a hierarchical structure of prefixes at the first level, then tools (elements), surfaces and/or conditions for second level naming, followed by subset conditions if necessary, then finally layer extensions. Each subset name is partitioned using a vertical “pipe” separator { | }. Sorting and managing this layer list is very simple, and is accomplished using the categories as the list headings, including the 'Funnel' filter for extensions. The vertical separator lines provide visual assistance when scanning this list, and enhance the process as a result.

The actual list of layers in the ArchiCAD MasterTemplate was developed based on actual testing with real projects. Testing occurred primarily using single and multi-family residential projects, however some commercial testing has also been done, and the layers still provide complete functionality for these projects as well.

The layers provided comprise a balanced amount appropriate and necessary for any small to mid size project. Unneeded layers may be purged, and alternate layers may easily be added. It should be noted however that the layer combinations which come with the MasterTemplate are set to use those layers included, and adding new layers will require manual updating of each combination one at a time.

Layer Names Prefixes Table

Layer name prefixes are used for categorizing and are as follows:

PREFIX	SORTING GROUP	REMARKS
A	Architectural	
C	Civil Engineering	
S	Structural Engineering	
L	Landscape	
M	Mechanical	
E	Electrical	
P	Plumbing	
U	Drawings	See extension table below.
Y	Special Elements	See extension table below.
Z	Trash / Recycling & Warnings	
ZZ	Detailer Items	
*** A**	Modules	

Layer Name Extension Table

Layer name extensions are used for grouping as well as sorting purposes and are as follows:

EXT	LAYER TYPE	TYPICALLY PLACED ITEMS
3D	Building Model Elements, common items that typically appear in most drawings.	Walls, Slabs, Roofs, Stairs, Cabinets, Moldings, Columns, Beams and 3D Objects.
2D	Building Info Elements, semi-common items that appear in some drawings, which materially add to or describe the building.	Dimensions (if need to separately control), Room Names, Drafting Fills, Part Symbols and Zones.
MARK	Reference Elements, semi-common items that appear in some drawings.	Section, Elevation, Detail & Interior Elevation Marks as well as break lines.
UNIQ	Drawing Elements, unique items that appear in one individual drawing at a time, which annotate and describe. These items can be 2D & 3D and describe the building.	Dimensions (if no need to separately control), Labels, Notes, etc. In general, any elements specific to, and limited to, a particular drawing.
Y (prefix)	Special Elements, special items that may or may not be visible, but are used to generate the model, data or a special view or appearance. Can be 2D or 3D extensions.	Solid Element Operators (Visible or Hidden), Explanatory Text and Prompts and Model Part Extras.
MOD	Control Elements, allows for separate control of modules.	Used to control the visibility of legends. Also as an example, individual units within an apartment or hotel type project.
DETAILER	Detailer Elements, allows for the incorporation of that detailing system.	Refer to Karl’s explanation.

Z	Trash / Recycle & Warning Elements, allows for a depository for temporary holding of elements prior to permanent removal from the project.	Any elements can be placed onto the trash layer.
EXIST'G	Existing Elements, filter & organize these elements that otherwise would be a part of 2D & 3D extensions.	Self explanatory. Delete these layers for new construction or leave unused. These layers can be omitted entirely in remodel projects when the module approach is used.
DEMO	Demo Elements, filter & organize these elements that otherwise would be a part of 2D & 3D extensions.	Self explanatory. Delete these layers for new construction or leave unused.

Additional Concepts and Items of Note

- The use of unique 'U' layers allows for all two-dimensional descriptive information relevant to a specific drawing to exist on one layer. Entities that are required to be isolated and/or seen for multiple drawings shall not be placed on these layers. For instance, room names would not be placed on any of these layers because they are a common entity used in many combinations. Dimensions may be placed onto a 'U' layer if there is no requirement to isolate them. (In some ways, dimensions function the same as annotations, describing the building model.)

  In conclusion, anything that describes or modifies a particular drawing may be placed onto a UNIQ. layer, i.e. dimensions, descriptive text, keynotes, labels, fills, or other primitives which are unique to that drawing. Elements on a specific U layer are shown for the corresponding drawing, and are hidden for all other views and drawings.

- All modeling elements have the 3D layer name extension, which is useful when sorting and filtering the list. Most of the 3D layers are visible for creating and working with the building model or site model.

- Suggested working method relating to understanding Layers: Print out a list of all layers and combinations for quick reference. Use OPTIONS > ATTRIBUTE MANAGER, select the Layers tab, then print to a TXT file, open in Excel, sort and print. You may want to separately add the layer extensions in another column as they are not delimited in this process.

- When setting up an addition / remodel project, please refer to that section of this document for a complete explanation. However, the following comments are appropriate here:

  - Layers with the file extension EXISTG are generally not necessary for differentiating between new, existing to remain and existing to be demolished elements. Those elements can alternatively be controlled through ID management as well as graphic representation, and further through the use of modules. New walls can use the same composite wall structure as existing walls, but have the background fill pen set (overridden) to a traditional blue poche, while existing walls can have their background fill pens set to white or transparent.

    This approach is based on a two file system described earlier above, where one PLN contains the Existing conditions including demolition items, and the second PLN contains a Hot Linked Module to the Existing plan as well as added New elements. Items to be removed shall be placed onto the Demolition Layer in the Existing PLN, which is typically hidden and set with a different layer intersection value.

Demolition plans are easily created by pasting a copy of the floor plan into a worksheet, then by switching the module layer off, the demolition layer will be isolated for manipulation of elements. Line types and fills are easily modified to represent demolished items.

- BIM layering is basically organized into two major groups; modeling and annotation (with annotations all being placed on the U | DRAWING layers). There appears to be no need in a BIM system to segregate 3D assemblies/parts by layer for auditing purposes as that is more properly handled through ID management, and thereby reduces the need for dedicated layers.

- If an imported DWG file layer structure must be preserved, a layer extension of DWG is appropriate to add (one can also add a sorting mark like a tilde to the beginning of each layer for additional grouping purposes).

Sometimes users get confused about the relationship between stories, layers, elevation levels (z-heights) and the stacking order of elements. Each system is independent of the other, although they all have some bearing on the visibility of elements. Layers do not actually stack on top of each other or correspond to display order, and heights are not used to determine which elements appear on top graphically.

Elements are shown on a plan if they are on a visible layer and the current story is their home story (which is usually the one they were drawn or created on). Elements based on a different home story may be visible if their settings allow it. This happens commonly for multi-story walls if their story visibility set to Automatic, and their height places them within in the current story's height range. Slabs or roofs may also be seen if their parameter is set to show on the story (or stories) above or below. and some objects and elements such as stairs may also show on multiple stories.

ArchiCAD's built-in display order rules determines which element stacks "in front" or "behind" another element. For example, lines and text generally float in front of walls and fills so that they are not obscured. These display rules are based on element types, not on heights, so manual intervention may be necessary for certain cases such as when chairs are showing graphically in front of the table that they should go behind (underneath). Use the Edit menu > Display Order submenu to override these rules for specific cases, changing which elements are in front of overlapping ones.

A Place for Everything - Example List of Where Elements Belong

LAYER	ELEMENT	REMARKS
A | MOLDINGS | LOW	Lintels over openings.	
A | MOLDINGS | LOW -or- A | WALL | ACCESSORIES	Wall Caps.	
Y | SPECIAL | MODELING-ELEMENTS (VISIBLE)	Filled in areas like walls above roofs at dormers; soil in pots or raised planters.	Elements that are visible in 3D, Section & Elevation but not in any plan view.
Y | SPECIAL | MODELING-ELEMENTS (INVISIBLE)	Solid Element Operators or interacting elements.	Hidden in most views, but turned on while creating or editing these elements to create effects on other (visible) model elements.
A | WALL | ACCESSORIES	Applied skins and wall treatments; Downspouts	Like those from Cadimage; stand-alone downspouts like with leader head.
A | ROOF | FRAMING	Roof rafters	Manually placed or automatically created using RoofMaker.
A | ROOF | ACCESSORIES (RAFTER TAILS + SURFACER)	Applied roof surface skin; gutters	Roof surfacing like those from Cadimage; use for rafter tails when modeled separately from structural rafters
L | LANDSCAPE | 3D PLANTS	Plants, Terra Cotta Pots	Seen in 3D exterior views and on Landscape Plan.

U | UNIQUE | PLAN + SECTION + ELEVATION.UNIQ	Building Dimensions (plus other annotation)	For annotations only seen on Floor Plan, but not other Plan drawings; this layer may be used for any 2D work placed on sections or elevations
U | UNIQUE | PLAN | SITE.UNIQ	Site Dimensions (plus other annotation)	For annotations including dimensions only seen on the Site Plan.
A | DIMENSIONS	Common Dimensions	Those which repeat between multiple drawings.
C | SLAB - ROOF | SITE HARDSCAPE (PATHS - DRIVES)	Paths, Ramps, Driveways	Roadwork goes on C | SITE | STREETS + CURBS + GUTTERS; allows isolation of nearby and distant civil model elements.

Layer Combinations Naming and Use within the ArchiCAD MasterTemplate

In contrast to keeping the Layers list to a minimum, it seemed correct to expand the layer combination list to cover the broad range of conditions, even if redundant combinations occur as a result. In that regard, Layer combinations were provided for each drawing type possible. That includes both presentation as well as contract document drawings.

Layer combinations generally correspond to Views, and have been set to show the appropriate elements for the creation of construction drawings.

In addition to layer combinations for drawings, additional combinations are also provided for other non-drawing conditions and processes, such as Modeling, Detailing, Layouting and * Special.

Layers that are hidden in any particular Layer Combinations are also set to be locked. This shortens the layer list in pop-up palettes, thereby enhancing workflow.

Updating layer combinations will be necessary should new layers be added or existing layers be modified. The procedure for this is outlined below.

Procedure for updating layer combinations

If the addition of a new layer is required, open the Layer Settings Dialog Box. Select the added Layer on the right side column, and start at the top of the Layer Combination list on the left side.

For each layer combination, inspect and set the visibility, mode, interaction and locking attributes one at a time. Go through each layer combination all the way to the bottom. After all have been set for the new layer, you may move on to the next new layer on the right side (if any), and repeat the process for each layer combination. When you have completed this for all new layers, click OK and exit the Layer Settings dialog box.

Conceptual Layer Combination Table

The following table illustrates the visibility of different elements as set within layer combinations.

Layer Types	2-D Views	3-D Views	Remarks
Type '1'			Model items that are also used in 2D drawings.
Type '2'			Annotation, explanatory or discriptive elements.
Type '3'			Modeling elements that do not show in 2D.
Type '4'			SEO Items, interactive but are not visible.

Insert Layer | Layer Combinations Matrix here.

MODEL VIEW OPTIONS NAMING, USE & MANAGEMENT

Model View Options are one of the seven named settings that make up a View in the View Map. And although all seven settings are important in controlling the expected outcome of a View, the two most critical are Layer Combination as well as the Model View Option settings, with the latter most often being misused. The importance of this setting is often overlooked and as a result, can be the cause of great confusion. That being said, we set out to simplify use of this setting as much as possible by providing an intuitive naming scheme.

In the ArchiCAD MasterTemplate, names for Model View Options are literal and based on the type of View they are associated with. So for instance, a CONDOC Floor Plan View will receive a CONDOC | FLOOR PLAN Model View Option as well as a CONDOC | FLOOR PLAN Layer Combination. This straight forward approach uses the principle of matching names, avoiding cryptic names that invariably lead to confusion and possible errors. Note: this is true for most Views, but may vary slightly depending on certain Views.

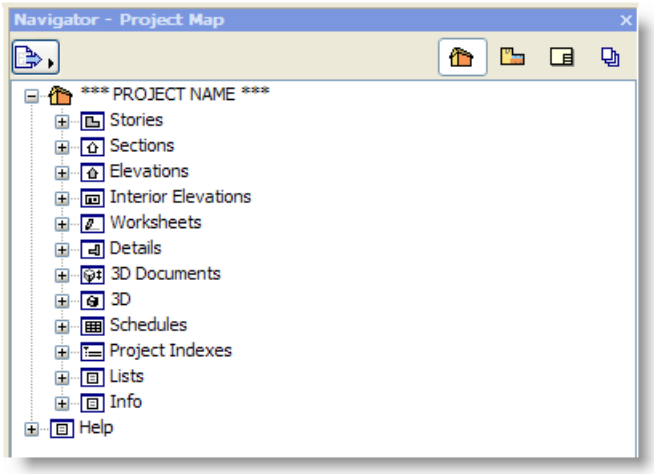
In MasterTemplate, Views, Layer Combinations and Model View Option names closely match each other. Some Model View Option are redundant in that two different MVO names use exactly the same settings, which makes for a slightly longer list of combinations. However, this approach facilitates a greater ease of establishing View settings by using matching setting names, thereby removing guesswork and improving workflow.

Of note though is that we have preset Views using the above mentioned naming convention. So for most of your work MVO choices should not require much attention, however there will be times when custom adjustment may be required. For those times our MVO naming system will greatly assist in workflow ease.

If you should need a new MVO combination custom to your specific need, please create that MVO in accordance with the description found in the ArchiCAD User's Manual.

PROJECT MAP STRUCTURE | FEATURES

Every ArchiCAD project file has a Project Map with the following sections:



Everything drawn in the project may be found somewhere in this Project Map (or in the Layout Book where Drawings are placed onto Layout sheets). These sections or folders contain “viewpoints” for entering, managing or accessing information such as 3D model elements, 2D annotation, or reports such as schedules, indexes or lists.

Let’s take a tour of all the viewpoints already set up in Project Map in a MasterTemplate file. Later, we’ll study the View Map, where these viewpoints are codified into specific “viewing styles” (technically, the View Settings), then we’ll look at the Layout Book where the Views are placed as Drawings on Layout sheets.

STORIES

In MasterTemplate, we start the project with four stories: the FIRST FLOOR (USA) / GROUND FLOOR (International); the next story up - SECOND FLOOR (USA) / FIRST FLOOR (International); another story up for the TOP PLATE (roof); and a bottom story for the FOUNDATION. You will need to adjust the story to story heights for your project, and may add or remove stories and rename them if necessary.

SECTIONS

There are four pre-set Sections that are drawn and placed into a “holding area” off to the right side of the central area. (See the screen capture on the next page.) It is intended that you move and stretch these into position (rotating if appropriate) at some point after you have created your building shell.

Three of these are set for construction documentation (CD01 SECT A, CD02 SECT B and CD03 SECT C), and one is intended for presentation usage (P01 SECT A) with parameters set for creating shaded views with shadows cast. You will most likely create additional Sections during the project lifecycle, and may eye-drop one of the existing ones to reuse the settings if you wish (changing the ID and Name, of course).

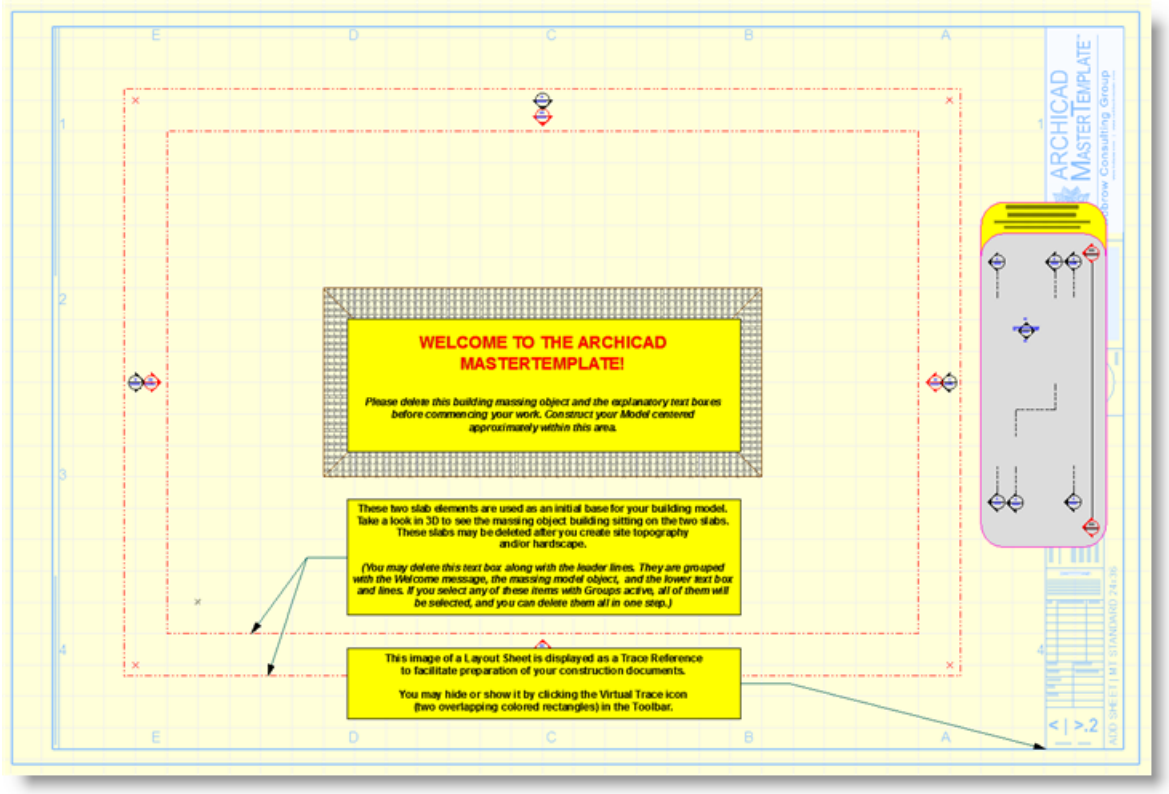
ELEVATIONS

There are 8 Elevation Markers pre-drawn, 4 for construction documents (CD series: EAST, NORTH, SOUTH and WEST) and 4 for presentations (P series). These are arranged around the central area of the original base slabs, and will probably need to be adjusted depending on the size of your building. If the orientation of your project does not have North at the top of the screen, feel free to rename them.

> **TIP:** To correspond the pre-drawn Elevation markers with a different cardinal direction, it is easier to select all of the Elevations at once, and rotate them into the proper position. That will change all of them in a single step to the proper orientations, after which you can move and/or stretch them as needed.

VIEWING AND ADJUSTING SECTION AND ELEVATION MARKERS

To see all of these pre-set markers and adjust them, switch to the View Map and double-click the Canvas Limits view. That will turn on the layers for Section and Elevation markers and zoom out to fit the entire model onscreen. You will notice that the Construction Document sections and elevations are shown with black marker heads, while the Presentation ones are set with red markers. The Elevation markers are set in pairs for each cardinal direction, one for CD and one for presentation.


WELCOME TO THE ARCHICAD MASTERTEMPLATE!
Please delete this building massing object and the explanatory text boxes before commencing your work. Construct your Model centered approximately within this area.
These two slab elements are used as an initial base for your building model. Take a look in 3D to see the massing object building sitting on the two slabs. These slabs may be deleted after you create site topography and/or hardscape.
(You may delete this text box along with the leader lines. They are grouped with the Welcome message, the massing model object, and the lower text box and lines. If you select any of these items with Groups active, all of them will be selected, and you can delete them all in one step.)
This image of a Layout Sheet is displayed as a Trace Reference to facilitate preparation of your construction documents.
You may hide or show it by clicking the Virtual Trace icon (two overlapping colored rectangles) in the Toolbar.

There is one Interior Elevation group placed in the “holding area” on the right side along with the Section Markers. You may move this into position within a room of your model, or simply eye-drop it to pick up the settings as part of getting ready to draw your Interior Elevations for each room.

WORKSHEETS

There are a large number of Worksheets already set up with content in MasterTemplate:

DT-01 and **DT-02** are for your use when creating Detail drawings (see the Detailer section later in this manual).

EX-01 through **EX-05** are explanatory materials that may be studied to see alternate Pensets, understand how each Penset changes colors and lineweights, learn how the MasterTemplate layer system works and view a subset of the U.S. National CAD Standard (NCS) layer names. You may delete these Worksheets (either in your template, or in a project) if you wish.

KN-01 is available for you to place FLOOR PLAN KEYNOTES if you would like to create a standard set of notes for placement on the Layout sheet for each story. An

alternative is to create keynotes separately for each story, perhaps directly added to the Layout sheet. Both systems are supported in MasterTemplate.

LG-01 through **LG-04** are set up for various Interactive Legends of Visual Favorites, the arrays of common elements for quick reference and eye-dropping settings. See the Interactive Legends section of this manual for more information on usage.

PLN-01 through **PLN-05** are available for your use to draw or import DWG or PDF files for site surveys, site plans, site demo plans, grading and drainage and utility plans. PLN-06 is set up as a “scratch pad” for sketches as well as temporary or long-term storage of miscellaneous reference drawings; you can create additional worksheets of course for this purpose as well.

You may also create your own Worksheets for any 2D drawing purpose, including Wall Sections, Enlarged Plans, Demo Plans, reference materials, temporary drawings, and backgrounds for use as trace references, etc.

DETAILS

In MasterTemplate, there are three Details initially set up. **D-00 DETAIL CREATION** is intended to be used for creating new detail drawings, in conjunction with two worksheets referenced with Virtual Trace as a background: **DT-02 DETAILER TEMPLATE** is used for consistent framing and placement within a layout grid system, and **DT-01 DETAILING LIBRARY PARTS** provides quick access to common 2D detailing component parts.

In addition there are two example detail drawings: **EX-01** is a foundation detail set as a source drawing, and **EX-02** is an example of a linked detail window. Please see the Detailer section of this manual for further explanation of how we recommend using the template to speed the production and organization of detail drawings.

3D DOCUMENTS

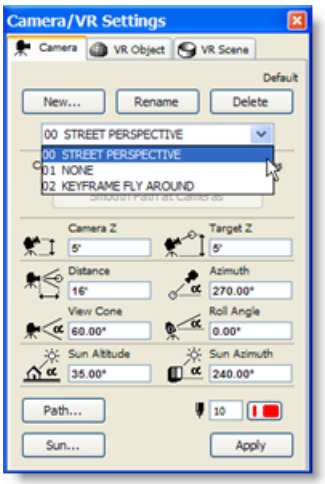
There are five **3D LEGENDS**, which show 3D views of a number of the “Quick Rooms” in the Interactive Legends. These are set for manual updating, so they will come up instantly when activated, and give very quick access to the elements in these pre-set room arrangements. You may eye-drop elements in these rooms from the 3D Document, then return to your design and place them into your model. Please refer to the manual section on Interactive Legends for more instructions.

In addition, there is one example drawing: **AD-01 ANNOTATED 3D DOCUMENT**. This

shows a cutaway of a sample model with dimensioning and annotation. You may delete this example from the template and/or individual projects if you wish.

3D

There are several pre-placed cameras that show up in the 3D section of the Project Map. The Path **00 STREET PERSPECTIVE** has one camera that is used as the basis of one of the Views in the View Map. It may be adjusted or replaced as desired, and you may add other cameras to this path.



Path **01 NONE** may be used as a quick way to hide cameras from the floor plan. In the Camera/VR Settings dialog box, you may switch from **00 STREET PERSPECTIVE** (the default Path) to other Paths using the popup menu; if you pick the 01 NONE path, there are no cameras and therefore the cameras will disappear from view.

Path **02 KEYFRAME FLY AROUND** has four cameras arranged equidistant from the center of the initial modeling area. You may use these cameras as the basis for easy generation of an animation that smoothly flies around the model in a circle. If your model is a different size, placement or proportion, you may select these four cameras and move them to a better position.

> **TIP:** To make the circle of cameras larger or smaller very easily, select all four cameras, and use the Edit menu > Reshape > Resize. The Resize command will not actually make the cameras a different size (they have no physical dimension), but it will make their configuration have a new radius (the target point will remain centered as the cameras move further or closer from that point).

SCHEDULES

There are a large number of Element Schedules in MasterTemplate. Please review these so that you are familiar with the various options. Some include picture images of the elements, while others are purely tabular.

It is expected that you will customize these and perhaps add to them. If you customize or add to them in your actual template file, all new projects will inherit the revisions and additions. If you modify or add to the schedules in a particular project, it will not affect other project files. However, you may use the Schedule > Scheme Settings > Export… button to save an XML file with the schedule Scheme, and later use the Import… button

to bring in that XML Scheme into another project or your template file.

We have not created any new Component Schedules (these generate quantity take-offs), so the ones you see in the Project Map are those created by Graphisoft. If you wish to create new ones, you may add them to your template or any project file.

PROJECT INDEXES

There are a large variety of Project Indexes in MasterTemplate. Many of these are simply variations with different Index Settings Criteria, so that they include only specific Subsets. Some of these will appear empty until you create Layouts which match the Subset Criteria.

There are some variations in formatting of the Indexes as well, so you may consider these as examples for you to review and choose whichever you find most appealing. Of course, you may modify, delete or add to these Indexes at any time.

There are two special purpose Project Indexes, the Drawing List and the View List.

The **Drawing List** is a Project Index that shows a summary of all Drawings placed on all the Layout sheets, including quite a bit of information that may help in project management. For example, you can see the Pen Set for each Drawing, the Scale, the Source View, the Last Update, and the Layout that this Drawing is placed onto. Since Project Indexes are bi-directionally associated with the Drawings and Layouts, you may edit the names, scale, pen set etc. right from the Drawing List.

The **View List** is another special Project Index that shows all the Views defined in the project. You may use it in a similar way to the Drawing List, in that it shows a lot of information for each View and you can edit the View Settings directly from within the View List window.

LISTS

The Lists in the Project Map provide a sophisticated system for generating raw or formatted quantity reports from your model. MasterTemplate has not added anything to the Lists that are provided by Graphisoft.

Feel free to study these various Element, Component and Zone lists to see if any of them provide information you find useful. For information on how to customize and create your own Lists, please consult the ArchiCAD Reference Manual or your local reseller or ArchiCAD specialist. Bobrow Consulting Group is also available on a

consulting basis if you wish to delve deeper into quantity analysis of your projects.

INFO

Project Notes is an editable text area that can be used for any purpose. In the MasterTemplate file, we have placed notes from one of the revisions to the template itself. This is an example of how you can add notes for later reference.

Each time you open the Project Notes, ArchiCAD will paste in a time-stamp as a convenience; this may be edited or deleted at will.

The Report will show information about the most recent generation of certain Views, including 3D, Sections, Elevations, etc. There are options for how much detail will be included in this Report window, which are set in the Options menu > Work Environment > Imaging and Calculation.

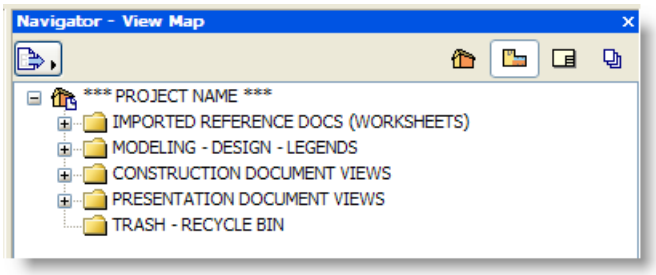
HELP

The entries in the Help section of the Project Map are built-in to the program, and include About, Help and a link to the Graphisoft website.

VIEW MAP STRUCTURE | FEATURES

MAIN CATEGORIES & GENERAL NOTES

In the View Map, MasterTemplate has set up five main categories to organize your information and workflow:



1. Imported Reference Documents (Worksheets) - These are empty folders for you to place Views of some of your Worksheets, typically of imported reference materials.

2. Modeling – Design – Legends - This is where you will spend much of your time at the beginning while you design, and will continue to refer to for access to the Interactive Legends of Visual Favorites.

3. Construction Document Views - Once you have created your basic model and started annotating it, you'll use these Views to refine and generate each of your Construction Document drawings.

4. Presentation Document Views - These Views are variations of the construction documents which are intended for use as presentations: Colored Elevations with shading and shadow, Furniture Plans, and others.

5. Trash Recycle Bin - You may place any Views or folders into the recycle bin to "get them out of the way", then later decide whether you want to restore or delete them.

Note that some of the Views have saved Zooms (specific locations of the plan or other viewpoint that will be shown when the View is activated) and others have "no zoom" (the View Settings have the checkbox set to "Ignore zoom when opening this view." In general, if the View is one for working on the model or a specific drawing, we often set "no zoom" so that when activating that View one returns to the last place one was working or looking at.

On the other hand, some Views are specifically designed to take you to a location, and they record the zoom (and in 3D views, the angle or camera position). You may adjust these Views to match a new position by right-clicking the View in the View Map and

choosing View Settings, and clicking the “Get Current Window’s Settings” button near the top of the dialog box. (NOTE: To change a 3D Perspective camera position, one uses a different command, as described in that section below.)

IMPORTED REFERENCE DOCUMENTS (WORKSHEETS)

We have set up three empty folders for you to use to organize reference materials:

- Consultant Imports (DWG Import)
- Design Sketches (PDF Imports)
- Web Downloads (PDF & DWG)

You may create new Independent Worksheets for these reference drawings, and then create Views of each Worksheet to place into the appropriate folder. This system may be modified or extended as desired.

MODELING - DESIGN - LEGENDS

MODEL / DESIGN VIEWS

The MODEL / DESIGN VIEWS folder is where you will spend much of your time in the beginning of your project development. Here is a description of each View in that folder, along with its intended use:

- **CANVAS LIMITS -** Activate this View when you want to see the Elevation and Section Markers as well as your Site and the building shell. You’ll use this when you need to adjust the placement of the Elevation markers, or to move other elements into position. This View automatically jumps to Fit in Window, so it will always zoom out to show all visible elements.
- **PRELIMINARY DESIGN -** This View is what you will use when first laying out your building model on the site. It has most of the Layers turned on, with certain exceptions. For example, markers are turned off to avoid having to be concerned about them until you have built up your basic model; layers that will be seen only on specific drawings (e.g. Electrical Plan, Ceiling Plan, etc.) are also not shown at this time.

  At a certain point, this View will start getting unwieldy as you assemble more of the model and annotation and it becomes less legible; at that point you should consider switching to dedicated Modeling or Construction Document Views.

This View does not have a Zoom attached (the checkbox is set to “Ignore zoom when opening this view”), so whenever you activate it, you’ll be back at the same place you last were working. This facilitates jumping back and forth to the Interactive Legends (see next section).

This View is set for the ground floor. When working on a multi-story building, you may use this View to return (from the Interactive Legends, the 3D Window or an Elevation, etc.) to the floor plan, then jump to the desired story using keyboard shortcuts or any other standard ArchiCAD method. However, feel free to create additional variations of this View for other stories if desired - simply activate this View, then go to the other story, and use the Save Current View button at the bottom of the View Map.

- **INTERACTIVE LEGEND WORKSHEET -** This is a very special View that you will likely use frequently. Activate this View to see the main groups of visual favorites for eye-dropping to pick up settings. It does not have a saved Zoom, so when you double-click this View you will return to the last place you were looking in this Worksheet. There are pre-saved Zooms available in the navigation area at the bottom left of this Worksheet window - use the little popup menu just to the right of the scale and percentage displays. These Zooms will jump you to different sections of the Interactive Legends.

  The Interactive Legends are organized to mimic the construction process as it relates to the steps in building an ArchiCAD computer model. They are therefore organized as follows: First assembled are slabs, walls & roofs. Second, doors & windows are placed. Third, plumbing fixtures, appliances & other mechanical items are placed. Fourth, electrical systems & lighting are placed.

  You may find it convenient to resize and move this Worksheet to a second monitor screen, so that you can refer to the Legends without actually clicking on the View and having this window come up in front of your plan. That way you can go back and forth and keep both the plan and the legends in view.

  ADVANCED NOTE: This Worksheet is prepared in a very special way to allow Walls, Windows, Doors, Roofs, Slabs and other 3D elements to be visible and active for use with the eye-dropper. (Normally, Worksheets only contain 2D elements.) If you use the Fit in Window zoom, you will see the Legends actually are a Hotlinked Module placed in a corner of the first floor of the Plan, that use a special Master Layer to control visibility. In the Worksheet, you are seeing this HLM on the Plan using Virtual Trace. For more information on how this is set up, please see the section on customizing the Interactive Legends.

- **3D AXO VIEW & 3D PERSPECTIVE VIEW -** These are saved 3D Views that will take you to the 3D window to look at your project model. The Axo view will automatically Fit in Window, so you will usually be able to instantly see the entire model. The Perspective view is set to look from “street level” towards the original

canvas working area, and may need adjustment depending on how you place your model.

You may adjust either of these Views to suit your needs, and of course navigate around the 3D window freely. If you'd like to change the Axo view, simply activate it, then move to your new viewing angle or position, and then right-click the View and choose View Settings. In the dialog box click the button at the top "Get Current Window's Settings" then click OK.

For the Perspective view, since it was created from a Camera placed on the floor plan and it is "attached" to that Camera, you need to do this somewhat differently. After moving to the new position or angle, right-click on the View in the View Map and select "Modify this Camera to Current view."

- **SITE DESIGN (LAND & HARDSCAPING) -** This View activates the Layer Combination and Model View Option appropriate for work on site design. You'll see the building shell along with the site, as well as the CD section markers.

- **BLDG. DESIGN (SECT-ELEV) -** This View uses the same layers as the Site Design View as you work on the building model, but changes the Model View Options to start drafting the construction documents, with Mark-ups shown.

- **INTERIOR DESIGN -** This View switches to a Furniture Plan layer combination, which will show the building walls along with fixtures and furniture. It is suitable for basic interior planning, design and fit-out of the model.

INTERACTIVE LEGENDS (FAVORITES)

The INTERACTIVE LEGENDS (FAVORITES) folder contains several subfolders for access to the Interactive Legends of Visual Favorites.

- The **LEGENDS | WORKSHEET** folder contains multiple views with saved Zooms of the Legends Worksheet referred to earlier in this section. We have retained this folder and these Views as an alternative to the Zoom popup in the bottom left of the Worksheet window; however, they are generally not needed and may be deleted if desired.

- The **LEGENDS | PLAN** folder gives direct access to the Interactive Legends, with multiple saved Zooms. Direct access is generally only needed when revising or reworking the Legends themselves, so you may not need to use this folder at all. However, be careful and DO NOT DELETE this folder or the View called LEGEND 3D | ALL, since it is referred to by the INTERACTIVE LEGEND WORKSHEET as a Virtual Trace Reference. Please leave this folder alone unless you are confident you fully understand the setup of the Interactive Legends and need to make changes.

- The **2D LEGENDS (DETAILING | SECTIONS | ELEVATIONS)** folder contains Views for several different Worksheets with Interactive Legends specifically for use with Sections, Elevations and Detailing. Feel free to open and explore and refine the contents, but do not delete these Views as several of them are used as Virtual Trace References for Section, Elevation or Detail windows.

- **LEGENDS | 3D VIEWS** contains many views of the Interactive Legends in 3D. You may use these as an alternative to the plan view of these Legends. This may help to view and pick appropriate elements for eye-dropping settings. You'll also get a better understanding of the preset Quick Rooms when you study them in 3D.

  These Views will bring up the 3D Window with the Layer Combination set to reveal the Interactive Legends (normally these Legends are turned off while you work on the model), and have an active clipping marquee so that they only focus on one section of the Legends or Quick Rooms. You may rotate around to see the elements from different angles.

  When you want to return to your model, perhaps after eye-dropping an element, you will need to use one of the Views rather than a shortcut such as the F2 key, since the Layer Combination is reset by these Views. When you double-click on the PRELIMINARY DESIGN or any other working View, you will set the Layer Combination back the way you need to continue work.

- **LEGENDS | 3D DOCUMENTS** contains Views of the saved 3D Documents created from several of the Interactive Legend Quick Rooms. As 3D Documents, they are locked into a single orientation, and cannot be viewed from another angle. Their shaded display is different than the OpenGL 3D window. You can eye-drop elements in this window as well, and return to your working view quickly.

  These 3D DOCUMENTS may be enhanced with text, labels and dimensions, but we have not done this in the standard MasterTemplate. Feel free to add more information to these document windows if you find it useful for your purposes.

3D PROJECTED VIEWS

The 3D PROJECTED VIEWS folder contains two subfolders, one for active use in the 3D Window, the other for creating Photo Renderings.

- **OPEN GL VIEWS (3D WINDOW)** is a folder with many saved 3D Views. These illustrate different viewing conditions that you may find instructive. Some of them activate Layer Combinations that invoke "special effects" or different viewing styles such as Hidden Line.

For example, SEE THROUGH WALLS uses a layer combination that has the Wall layers set as a wireframe. SEE THROUGH ROOFS is similar except that the walls are normal but the roofs are wireframe. HIDDEN LINE AXO creates a line-drawing by changing the 3D window settings (check out what's been changed in the View menu > 3D View Mode > 3D Window Settings).

The CUT-AWAY AXO has a stored Marquee cutaway; this is created by going to 3D with a Marquee drawn on the plan, and selecting Show Selection/Marquee in 3D; a View like this can then be Saved and the Marquee cutaway is remembered.

Please explore these to understand how you might use them during your design and presentation process. You may want to refer to the Sample Project in order to see the effects in context, since some of the saved angles and Marquees may not show properly in your own model. Once you know what these Views can do, feel free to adjust, remove or add to them as desired.

After you clear out any Views you no longer need, this folder is a convenient place to story your own 3D Views. You may use this for your own quick access to part of the model, or to quickly bring up views of the model for presenting to your clients.

- **PHOTO RENDERINGS (PRESENTATION)** is a folder with two saved Views. One of them is set to generate a Lightworks rendering, the other a Sketch rendering. Experiment with this at any time to see what they generate.

  You may revise or add to these Views, and also may place any of them onto a Layout sheet. When you Update the Layout sheet(s), the View(s) will be regenerated with the current state of the model. This can be an excellent way to enhance a set of drawings, with the images "guaranteed" to be consistent with the construction documents.

MODULE VIEWS (FOR EXPORT)

This folder has a special purpose, and is supplied with only one View although you could add others if needed. This View activates a Layer Combination that is set up for exporting the building model as a Hotlinked Module from one project file to another. This layer combination makes visible most or all of the 3D modeling elements, and turns off the markers so that Sections and Elevations are not included in the export.

A lengthy explanation of how this concept is used for remodels and additions is included in that section earlier in this manual. This approach can also be used when Hotlinking one or more buildings into a Site Model PLN file, or any time that one building model needs to be Hotlinked into another ArchiCAD project.

Basically, after invoking this View, zoom out to see the whole model, then draw a multi-story (heavy border) Marquee around everything you wish to include. Use the File menu > External Content > Save Selection as Module… command, and save the visible model elements (this approach will not include anything on hidden layers) as a MOD file. In general, uncheck the “Replace selection with this hotlinked module file” so that the elements remain editable within this file.

In your destination file, you may use the File menu > External Content > Place Hotlinked Module… command to bring in the MOD file.

CONSTRUCTION DOCUMENT VIEWS

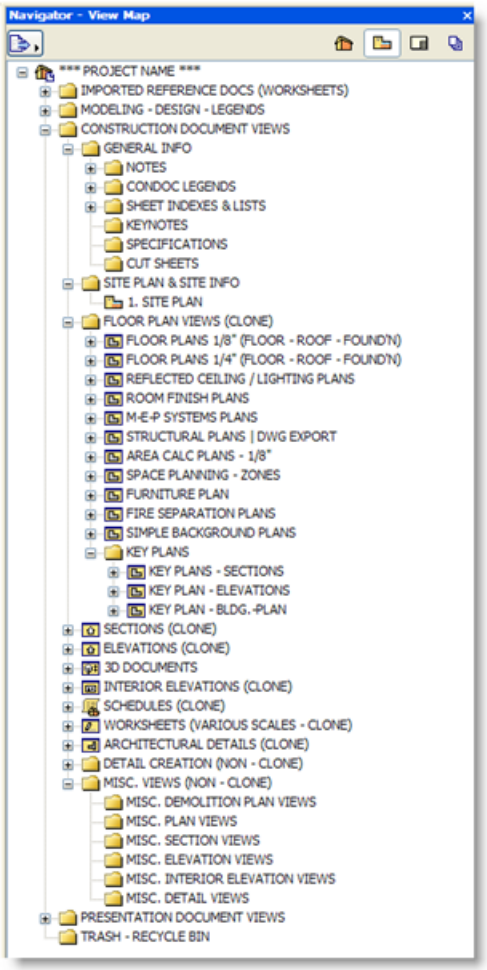
This section of the View Map is used to prepare your actual working drawings. It includes a very extensive collection of Clone Folders for most of the construction documents, along with a few normal folders with miscellaneous additional Views.

Clone Folders

Clone Folders are special organizing tools available in the View Map that create “viewing styles” for sections of the Project Map. Each Clone Folder points to and remains associated with a specific folder or category of the Project Map, such as Stories, Sections, Elevations, Details, etc. The Clone Folder automatically includes Views for EACH viewpoint in that Project Map category, and will expand as more are added.

A brief example will make this idea clearer to those of you who are not familiar with this part of the ArchiCAD working environment. When we generate a Section, it’s important to have certain layers turned on so we see the appropriate parts of the model. The walls, roof, slabs and fixtures are visible, but generally the movable furniture is not. This is of course controlled by the Layer Combination for the Section View. In addition, other conventions are used for all Sections in a particular project - they generally use the same scale, Model View Option, dimensioning style, etc. When you put all of these together in the View Settings for a Section, you may consider or describe this as a “viewing style”.

If you create a Clone Folder for Sections, and set this viewing style for that folder, then your setup work is simplified. Each time you draw a new Section, a View is created in that Clone Folder with the specified viewing style (technically, the same View Settings). You don’t have to create the View manually, it’s done for you, and it’s guaranteed to be consistent with the other Section Views.



Now that we have that example in mind, let's take a look at the View Map section for **CONSTRUCTION DOCUMENT VIEWS,** as seen in the screen capture on the left.

Notice that **GENERAL INFO** and the folders directly below look like simple file folders, while the **FLOOR PLANS, SECTIONS** and others in the middle section have very different icons.

The GENERAL INFO folder is a "normal" one, and one can add subfolders or individual Views into such folders as desired.

The various folders inside the **FLOOR PLAN VIEWS (CLONE)** are all Clone Folders, and they each record a "viewing style" for that type of document. For example, FLOOR PLANS ¼" (in the International Template, FLOOR PLANS 1:50) is used for many projects as the primary floor plan document. It uses a certain layer combination, the named scale, and MVO and dimension preferences appropriate for this type of drawing.

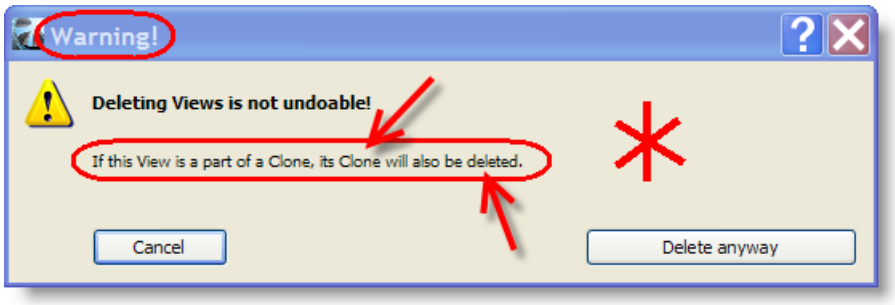
The **REFLECTED CEILING / LIGHTING PLANS** clone folder has a different viewing style, with layers set to correctly show ceiling information, and a different Model View Option (doors and windows are shown simply as framed cutouts in the wall, without swings or other detail). Each of the Plan clone folders has a somewhat different style, prepared especially for that document type.

Each Plan clone folder will include EVERY story in the project, because that is the way Clone Folders work - they include all items in that category of the Project Map. In larger projects, this can be a great time-saver, since as more stories are added, they will automatically be included in each of the Plan clone folders. Even in small projects, it is still convenient to set up clone folders in the template, since they retain the viewing styles for each story.

Of course, some of the Views that are automatically included in certain Plan clone folders are not needed. For example, there is usually not a Ceiling Plan for the Foundation Story, so we have renamed that View (and other similar ones) using N/A to indicate that it is Not Applicable. Even though all the Views are generated automatically in a clone folder with names that come from the Project Map viewpoint, one can rename any View manually as desired.

WARNING: Do NOT delete a View inside a Clone Folder!! If you delete such a View then ArchiCAD will DELETE the ENTIRE Clone Folder!

If you attempt to delete a View in a Clone Folder, you will get the following warning message:


Warning!
Deleting Views is not undoable!
If this View is a part of a Clone, its Clone will also be deleted.
Cancel
Delete anyway

Please do NOT ignore this message and click “Delete anyway” unless you deliberately want to delete the entire Clone Folder!

If you want to delete that viewpoint from the project (for example, an unwanted Detail or Worksheet), go to the PROJECT MAP and delete it from there, rather than inside the Clone Folder. That way, only the one viewpoint will disappear, rather than the entire folder of Views.

For Sections, the clone folder works beautifully, since every section (for the most part) will use the same style. For Details, the clone folder works well, but requires manual adjustment for detail drawings that are at different scales than the “standard style” for the Detail clone folder.

Fortunately, one can select individual (or several) Views in a clone folder, and open the View Settings dialog to change the Scale (or other settings such as Layer Combination, Dimensions or Model View Option) for just the View(s) chosen. In addition to the **ARCHITECTURAL DETAILS (CLONE)** folder, one will need to manually check and adjust these settings for the **WORKSHEETS (VARIOUS SCALES - CLONE)** folder.

In addition to actual Construction Document clone folders, there is a special group of clone folders for **KEY PLANS.** These are used for small Key Plan drawings that are placed on Layouts that have Sections or Elevations that give a “map” or “key” of where these sections or elevations are located in relation to the building.

Another clone folder contains **SIMPLE BACKGROUND PLANS,** which can be used when sending out DWG files for use by consultants, or for other similar purposes.

Other Folders

There are other “normal” folders in the Construction Document area that have names that are generally self-explanatory. Some of these folders already have Views included, while others are empty and set up for your use once you have created the appropriate Worksheet or other drawing or View.

The **DETAIL CREATION (NON-CLONE)** folder contains several Views for use while working on Detail drawings. For more information on this folder, please see the Detailer section in the manual.

PRESENTATION DOCUMENT VIEWS

This section of the View Map is used for preparation of presentation drawings. It contains a combination of clone folders for **FURNITURE PLANS** and **PRESENTATION FLOOR PLANS,** along with normal folders for presentation Sections, Elevations and Renderings.

The reason that the presentation Sections and Elevations are not assembled using clone folders is that there is currently no way to separate the presentation Elevation markers (which have shading and shadow set) from the construction document Elevations (which are line drawings). They are all grouped together as Elevations, and all Elevations will be included in any Elevation clone folder. To simplify management in this case it has been decided to use a normal folder with only the presentation elevations placed in it.

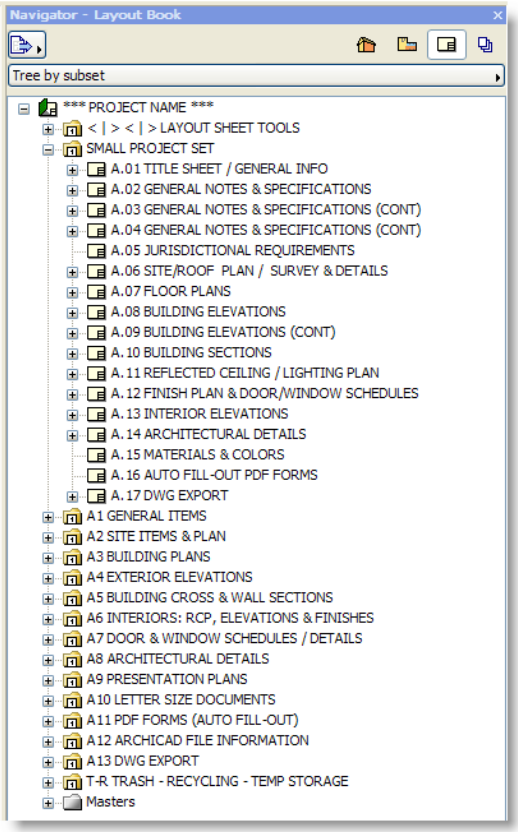
TRASH - RECYCLE BIN

This folder is available for use as a temporary place for putting Views or folders to “get them out of the way” without deleting them. Later, one may decide to go ahead and remove them, or restore them into a visible position.

LAYOUT BOOK STRUCTURE | FEATURES

FEATURE SUMMARY

Here is a summary of the key features of the MasterTemplate Layout Book structure:


Navigator - Layout Book
Tree by subset
*** PROJECT NAME ***
< | > < | > LAYOUT SHEET TOOLS
SMALL PROJECT SET
A.01 TITLE SHEET / GENERAL INFO
A.02 GENERAL NOTES & SPECIFICATIONS
A.03 GENERAL NOTES & SPECIFICATIONS (CONT)
A.04 GENERAL NOTES & SPECIFICATIONS (CONT)
A.05 JURISDICTIONAL REQUIREMENTS
A.06 SITE/ROOF PLAN / SURVEY & DETAILS
A.07 FLOOR PLANS
A.08 BUILDING ELEVATIONS
A.09 BUILDING ELEVATIONS (CONT)
A. 10 BUILDING SECTIONS
A. 11 REFLECTED CEILING / LIGHTING PLAN
A. 12 FINISH PLAN & DOOR/WINDOW SCHEDULES
A. 13 INTERIOR ELEVATIONS
A. 14 ARCHITECTURAL DETAILS
A. 15 MATERIALS & COLORS
A. 16 AUTO FILL-OUT PDF FORMS
A. 17 DWG EXPORT
A1 GENERAL ITEMS
A2 SITE ITEMS & PLAN
A3 BUILDING PLANS
A4 EXTERIOR ELEVATIONS
A5 BUILDING CROSS & WALL SECTIONS
A6 INTERIORS: RCP, ELEVATIONS & FINISHES
A7 DOOR & WINDOW SCHEDULES / DETAILS
A8 ARCHITECTURAL DETAILS
A9 PRESENTATION PLANS
A10 LETTER SIZE DOCUMENTS
A11 PDF FORMS (AUTO FILL-OUT)
A12 ARCHICAD FILE INFORMATION
A13 DWG EXPORT
T-R TRASH - RECYCLING - TEMP STORAGE
Masters

- Two different systems are provided: one is simple, with sequential numbering; the other includes pre-defined Subsets to hierarchically organize Layouts in groups for more complex projects. A sheet index is located on the cover sheets for both sets. Choose the appropriate system for your office or the particular job.
- The Layout sheet numbering is usable immediately, yet is easily modifiable should you desire a different system.
- Master Layout Sheets include Autotext wherever possible to minimize setup time, and are supplied in various sizes both with and without grid and column divisions.
- Drawings are pre-placed onto Layouts wherever possible to save setup time. They will require adjustment depending on the size of the project and the sheet.

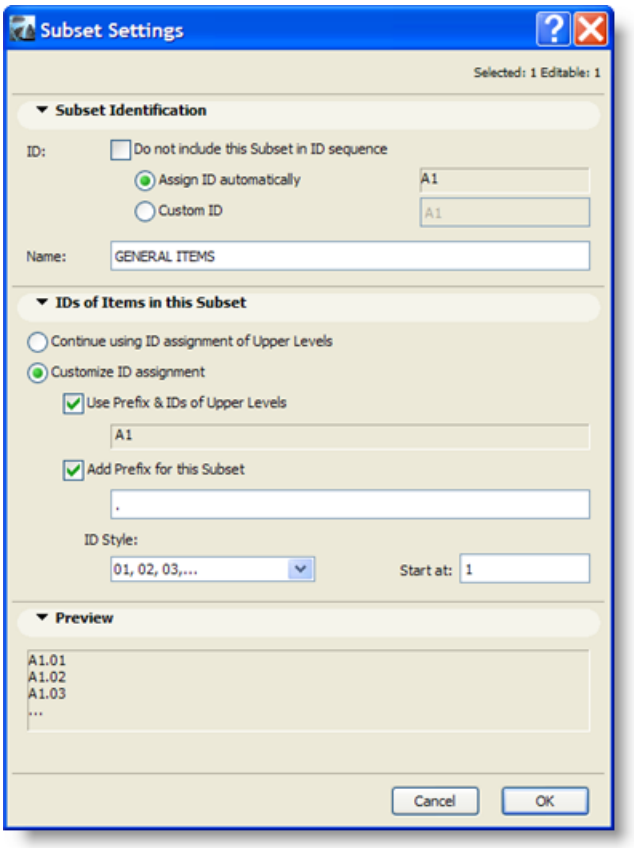
SHEET ORGANIZATION - TWO SYSTEMS

The simple structure of the Layout Book includes the skeletal form that can grow to handle projects of any arbitrary size.

There are two sets of layouts, one based on a simple numerical sequence (drawings A.01 through A.17 in the SMALL PROJECT SET) and the other based on hierarchical category Subsets (e.g. A300 series for the BUILDING PLANS, A400 Series for the EXTERIOR ELEVATIONS, etc.).

In your office, you may prefer the simpler option or may need the more complex system, or you may change depending on the project size. Both of them are included for you to use “as is” or to customize. For example, you can change the numbering format from A3.01 and A3.02 to A301 and A302, etc.; or insert, renumber, rename or reorder these Subsets and all Layouts within them.

To change the numbering system, select the Subset folder and click the Settings button at the bottom of the Layout Book to bring up the Subset Settings dialog:

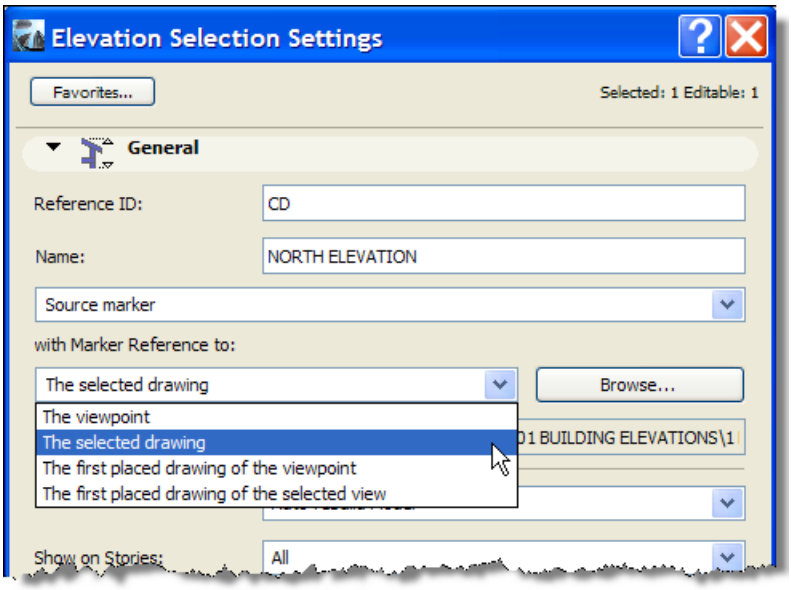


You may change the name of the Subset, the ID, the Prefix (e.g. “.”) and the Item ID numbering style and starting point. For example, if you prefer A101 instead of A1.01, uncheck the Prefix so that the ID numbers for the items (Layout sheets in this case) “run together” with the ID of the Subset itself.

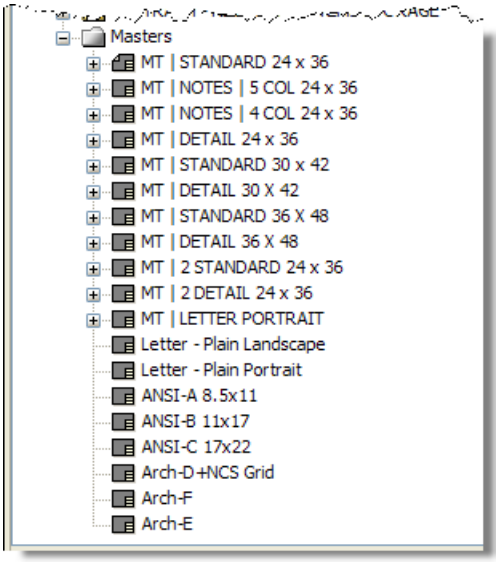
If you reorganize the Subsets, and you leave the setting to Assign ID automatically, then the ID will adjust based on the order in the Layout Book. However, in some cases you may prefer to give the Subset a Custom ID so that it always has the same one. You can also click the checkbox “Do not include this Subset in ID sequence” if you want to “squeeze this in” without disrupting the normal sequence (for example, to set up the A320 series between A300 and A400).

In general, you should decide before you print sets for review or submission whether to use the Small Project Set or the hierarchical subsets, and remove one of them from the project. It is technically possible to leave both the Small Project Set and the hierarchical sets intact in any project, but it will cause some issues with reference numbering. This is because most of the pre-placed Drawings are repeated in both sets, and this will affect the reference numbers seen in the Elevation and Section markers.

The marker for a Section, for instance, will refer to one of the places where that Section is seen in the Layout Book. If you leave both Layout systems intact, you may need to open the settings for each of these Markers and choose the Marker Reference - use “The selected drawing” and then Browse… for which Drawing you prefer to reference.



THE LAYOUT MASTERS


Masters
MT | STANDARD 24 x 36
MT | NOTES | 5 COL 24 x 36
MT | NOTES | 4 COL 24 x 36
MT | DETAIL 24 x 36
MT | STANDARD 30 x 42
MT | DETAIL 30 X 42
MT | STANDARD 36 X 48
MT | DETAIL 36 X 48
MT | 2 STANDARD 24 x 36
MT | 2 DETAIL 24 x 36
MT | LETTER PORTRAIT
Letter - Plain Landscape
Letter - Plain Portrait
ANSI-A 8.5x11
ANSI-B 11x17
ANSI-C 17x22
Arch-D+NCS Grid
Arch-F
Arch-E

The MasterTemplate Layout Masters are designated by the letters MT (see image, left). The USA sizes include 24x36, 30x42 and 36x48 sheets, while the International version includes several standard metric sizes.

In general, there is one STANDARD version at each size and a DETAIL version that has a Grid system set up.

In some cases, we have prepared additional versions with multiple columns already delineated for placement of General Notes. In addition, there is one set of Masters with a wider Title Block, providing an alternative you may prefer.

These variations are not deployed throughout all the possible sheet sizes. You may create your own Masters to add to the pre-supplied list at any time, and copy or adapt information from these variations if you wish. To create a new Master, you may right-click on the Masters folder and choose New Master Layout.

> **TIP:** If you want to make a copy of an existing Master in order to create a variation of it, drag that Master into a new position in the list while holding down the Control key (PC) or Option key (Mac). You will see a “plus” sign indicating

you are making a copy.

We have left the standard Graphisoft Layout Masters in the template in case these may be useful to you.

Instructions for preparing your firm's Title Block on the Masters are given in the section on Setup and Customization earlier in this manual.

The Masters include as much Autotext as possible to reduce manual data entry. This includes:

- Project Name [taken from Project Info]
- Client Name and Address [from Project Info]
- Date [print date]
- Sheet ID [from Layout Settings]
- Sheet Name [from Layout Settings]
- Project File Path / Name [seen in small print on the far left side]

VISUAL CUES FOR TEXT ENTRY AND PROJECT INFO

When editing text, on the Masters or elsewhere, if you click to place the cursor and find that an entire word or phrase highlights all together with a shaded background, you're selecting Autotext data. This may be the entire text block, or only a part of a larger block of text. You cannot edit the Autotext item directly, since the information is being entered automatically based on the field or item reference.

You can delete an Autotext entry or change it's formatting, however to see what it refers to or change it, you'll need to click the special Autotext icon button. In the Insert Autotext dialog box, you'll be able to see the category and Autotext item reference.

On the Title Sheet layout much of the text in the Project Team and Project Data areas is pulled from the Project Info database. This Project Info is another example of Autotext, and to edit this data you'll need to go to the File menu > Info > Project Info and enter the appropriate text into each field.

As a convention in MasterTemplate, uninitiated entries in the Project Info have multiple asterisks (e.g. ***PROJECT NAME***) to make it easy to spot information that has not been initialized or filled in. At a convenient time enter the data into the Project Info dialog box, and the text on the sheet will update.

In many cases on the Title Sheet, the Autotext entries are text elements that have been locked using the Edit menu > Locking submenu. When you select them, you'll see grey handles instead of the usual black ones, and will not be able to move or edit them. If

you simply want to change the data, do that in the Project Info. However if you want to move or change the formatting or arrangement, you'll need to Unlock these items from that same menu.

> **TIP:** For more instructions on how to enter Project Info, as well as how to export it from one project and import it into another, please see the Filling in Project Info section under Starting Your Own Projects, earlier in this manual.

IMPORTANT: On this sheet as well as many of the others, there are blocks of text that have a grey background. This is your visual cue that data has not yet been filled in and requires attention. When you are ready to enter this information, simply edit the text block on the Layout, and then change the background color to white or transparent.

LAYOUT SHEET TOOLS

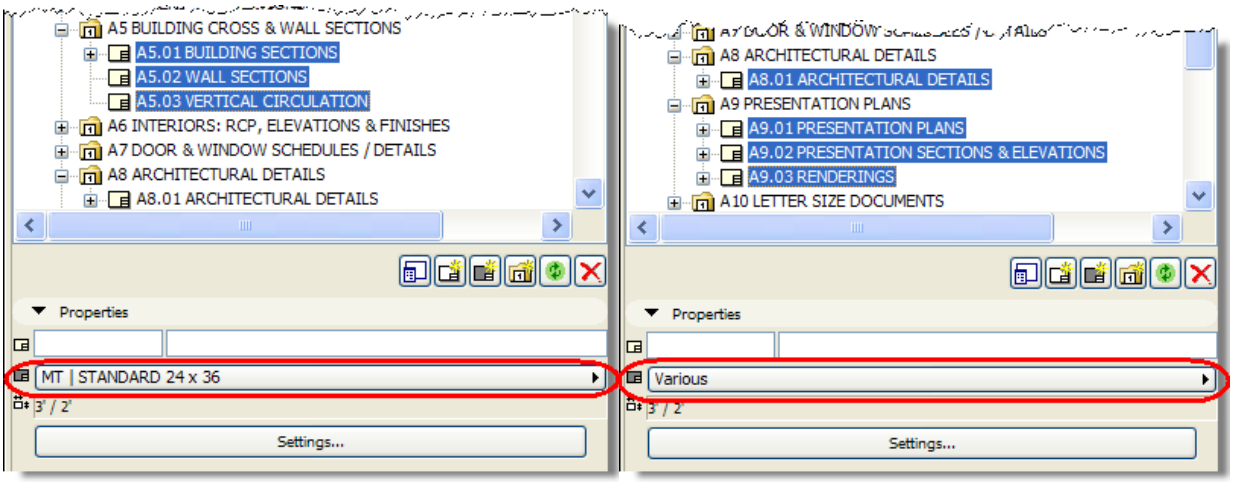
The LAYOUT SHEET TOOLS subset folder includes a sheet called LAYOUT SHEET INTERACTIVE LEGEND (PARAMETER PICKUP). You will see a variety of placeholder Drawings arrayed with various combinations of Pensets, Title Types and Scale. You may eye-drop any of these Drawings to set the Drawing Tool default settings to match these parameters. This is especially handy for situations when you'd like to inject (with the Syringe tool) these settings into a Drawing that has been accidentally altered.

In addition you may add new Layout sheets into the Layout Book by creating copies of a Layout in the Layout Sheet Tools subset. Simply Control or Command Drag the pre-defined layout sheet into its new position, and a copy will be placed there.

CHANGING THE LAYOUTS TO A DIFFERENT MASTER

The Layouts in general are set to use one Master, with some variations (such as a Detail Master of the same size that uses a grid system). You may change the Master for the Layouts at any time, either while setting up your custom version of the template or for a specific project.

You can reconfigure the Masters very quickly. Select multiple Layouts in the Layout Book and choose a different Master from the popup list in the Properties area at the bottom of the Navigator.



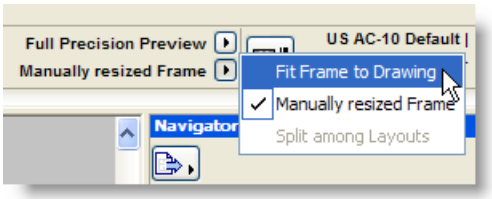
Be careful, and notice if all the Layouts share a common Master (see left image above) or have different Masters (see right image: “Various”). Ideally, you’ll want to pick all the Layouts that share a common Master, and change them all to your new Master, then repeat the process for other variations separately.

ARRANGING YOUR DRAWINGS ON THE LAYOUTS

Placement of Drawings onto Layout sheets in MasterTemplate is no different than in any other project file. The only change is that many of the Drawings are pre-placed onto sheets already, which will save you a lot of time.

Of course, depending on your project dimensions and the size of sheets you prefer, the Drawings will likely need some minor adjustment on the Layouts, or possibly some major reorganization.

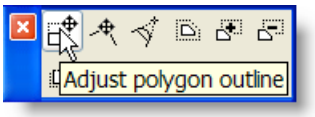
Some of the pre-placed Drawings are placed onto Layouts with the setting for a “Manually resized Frame”. This means that if your building is a different size that was preset, you will need to resize the Frame for the project information to be shown on the sheet properly. Often it is convenient to select the Drawing on the Layout, and switch the setting in the Info Palette to “Fit Frame to Drawing”:



When you do this you may see the Drawing jump to a new position in addition to resizing itself. Sometimes, it may jump offscreen, particularly if your building is placed in a very different location than the original massing model. If necessary, use the Fit in

Window command to see where it's gone, and drag it back to the Layout.

In some cases, Fit Frame to Drawing is not desirable, and you will need to adjust the boundaries of the Frame manually. Simply select the Drawing on the sheet, and press down on one of the corners of the Frame to bring up the editing "pet" palette.



From the palette, choose the "Adjust polygon outline" option in order to resize the Frame on two sides at once. Repeat from the opposite corner to complete the process.

In the preset Layouts, multiple Drawings are placed onto the same Layout wherever it seemed appropriate. For example, two building elevations are placed onto sheet A.08, and three Sections are seen on sheet A.10 in the Small Project Set. If your building proportions don't allow these Drawings to fit properly onto the same sheet, you will need to reorganize your set.

Add new Layout sheets as necessary, and move the Drawings from one sheet to another as you see fit. This may be done very quickly in the Layout Book: expand a Layout (click the "plus" sign) to see the Drawings on that Layout, and drag the Drawing icon and drop it onto another Layout in the list.

You can do this reorganization at any time, once you've gotten the basic building footprint delineated and have decided what scale and sheet size you'll be using. If you do it early, you'll have your Layouts ready to print at almost any time while you work.

INTERACTIVE LEGENDS

Start-Up Visual Legend Module included

Example provided, user to further enhance per offices standards.

Elements within the visual legend like roofs and slabs are intended to provide the composite structure and basic defaults including layer and materials. The final materials must be controlled by the user. Similarly for roofs, alt-clicking on a roof will provide the composite structure and defaults as well as a 4:12 pitch. It will up to the user to define the actual roof pitch. The reason for this is that there would be too many combinations of pitches, materials and composite structures to represent in a small legend. We chose the most important aspect (composite) as well as most common defaults.

Legend Descriptions:

3D Wood Frame Composite Structures Legend: for wall, slab and roof construction (first steps in building a model). Also may include finish floor/ topping slabs.

3D Window & Door Legend: includes each type of door & window at a generic scale, and a description for applying the Parameter Transfer technique.

3D Mechanical Systems Legend: objects including appliances, plumbing fixtures, HVAC eq, duct runs & drainage piping.

2D Annotation Legend: includes dimensions, text, labels, fills, markers perhaps (describing the building for condoc output).

2D-3D Electrical Systems Legend: includes 2D control symbols as well as 3D electrical & lighting fixtures.

2D-3D Site Development Legend: includes 2D landscaping for condocs, and 3D for modeling ie cars, mesh maybe (discourage placing high polygon count trees, but can include if required).

3D Scene Population: includes non-fixture items that embellish the model for presentation.

How to maintain and/or create your own.

Format and size was selected so as to easily be readable within the typical viewing area

of most workstations.

PRE-SET INTERACTIVE SCHEDULES

- Importance of ID management, and how to control.
- Schedules look to the ID in filtering the information. As a simple example, all plumbing items that have an ID that starts with ‘P’ will be included in the schedule. Everything else will be excluded.
- Automatic object labeling & how to control.
- Editing within the schedule.
- Document > Schedules & Lists > Element ID Manager for mass changes and control.

PRE-SET SECTION & ELEVATION VIEWPORTS

PRE-SET MILLED RAFTER TAIL FEATURE

The following describes how to achieve custom milled rafter tails using the Milled Rafter Tail feature in the ArchiCAD MasterTemplate in conjunction with Solid Element Operations.

Located in the Profile Manager is a handy tool for making custom milled rafter tail ends. The procedure for creating these elements is as follows:

Select the AMT Rafter Tail profile from the Profile Manager. Go to Design > Complex Profiles > Profile Manager, then select Choose Profile where you then select * AMT Rafter Profile. Note that the provided profiles are for 8" thick tails.

Delete the example profile used as a place holder.

Select the fill tool and Magic wand the desired profile.

Drag the top left corner of the selected fill to align with the hotspot at the graphic pitch scale.

Then rotate the selected fill from the hotspot dragging left to the desired pitch.

Store the newly created profile.

At this point you have two choices for creating rafter tails as follows:

Option One:

Option One: create rafters using the Roof Maker Tool located in Design > Design Extras > Roof Maker. Select one or more roofs, then using the Roof Maker Tool, select Roof Wizard to create rafters based on design criteria you input.

In a Section window and with all rafters grouped, adjust the vertical position of the rafters to the correct height.

Option Two:

Draw slanted beams at 8" high and at desired width to match pitch..

Next:

With the wall tool set to use the complex wall profile created earlier and placed on the Y | SPECIAL | MODELING-ELEMENTS (SEO-INVISIBLE).3D Layer, draw a profiled wall along the eaves in contact with the angled beams or rafter tails. Make sure all the segments are grouped.

In any available section view port, select the profiled wall group and align with the beam ends.

Use the Solid Element Operation feature to subtract the Target beams from the Operator complex profiled walls. Make sure that "new surfaces of target use their own attributes" is checked.

Although we have set this in advance, the layer intersection group value must be something other than the value for other layers with walls on them, or else the two layers may have an undesirable interaction.

DETAILER SETUP & USE

Integration of the Detailer system and use (refer to Karl Ottenstein’s doc, see hyperlink below).

Includes Detailer tracing template as a preplaced object in Detail Window.

Includes Detailer snapping object preplaced onto Master Layout Sheet.

USER REQUIRED MANAGEMENT | CHECKLIST

Tasks user is required in adjusting template to fit a specific project:

The first time template is used, insert office standard items like company name, seal, etc. onto master sheet. Insert boilerplate notes and other office standards onto the Title layout sheet.

Enter project specific auto text.

Adjust story levels.

Adjust modeling slab relative to project zero and project limits.

Adjust limits of section and elevation marks, and distant area depths.

Adjust frame of placed drawings on layout sheets.

Adjust location of placed drawings on layout sheets based on project scale.

Adjust size and position of placed schedules as these will increase in length as entities are added to the project. The same goes for the Sheet Index list placed on the title sheet.

Select & control types of drawing titles used (if alternate is desired).

Adjust title layout sheet indexes and drawings as required.

Add project specific layers, if necessary.

Control the object label check box for objects not requiring an attached label.

Template Use Checklist, sequence of use (after initial setup).

Fill in project information from File menu.

Set number of stories and relationships if required.

Delete unneeded Layout Sheets.

Rename or add story levels if required.

Set story levels to display project specific absolute or relative levels.

WORKING METHODS | STANDARD PRACTICES IN ARCHICAD

Stacking Drawings in Layout Sheets:

In the same way Virtual Trace allows the user to see the current view overlapping another related view, stacking drawings on a layout sheet achieves a similar result, and for similar reasons. Although ArchiCAD 11 allows you to print from the model area and include a Trace Reference, you cannot do the same when printing or plotting a layout sheet. However you can achieve the equivalent by overlapping or stacking drawings. Further, because every drawing can have its own penset, one of the overlapping drawings can have a faint or faded out penset (all light grey for instance) simulating a traditional background effect.

A couple popular uses are when the user needs certain information to stand out next to background information, like in either an electrical or lighting plan. Also, overlapping an existing survey with a modified can sometimes be beneficial. Finally, structural systems standing out against the background floor plans.

Tip: when stacking drawing described above, change the drawing title to 'No Title' for one of the two stacked drawings, typically the background drawing.

Parameter Transfer Technique

This is used primarily in two situations; for updating older version library parts to current, and in windows or doors where the same or similar parameters are desired to be consistent between two different types of doors or windows.

The following describes the process:

Eyedrop any library part element (door, window or object) in your plan to pick up its settings.

Next, select either the single object or all objects that you desire updating.

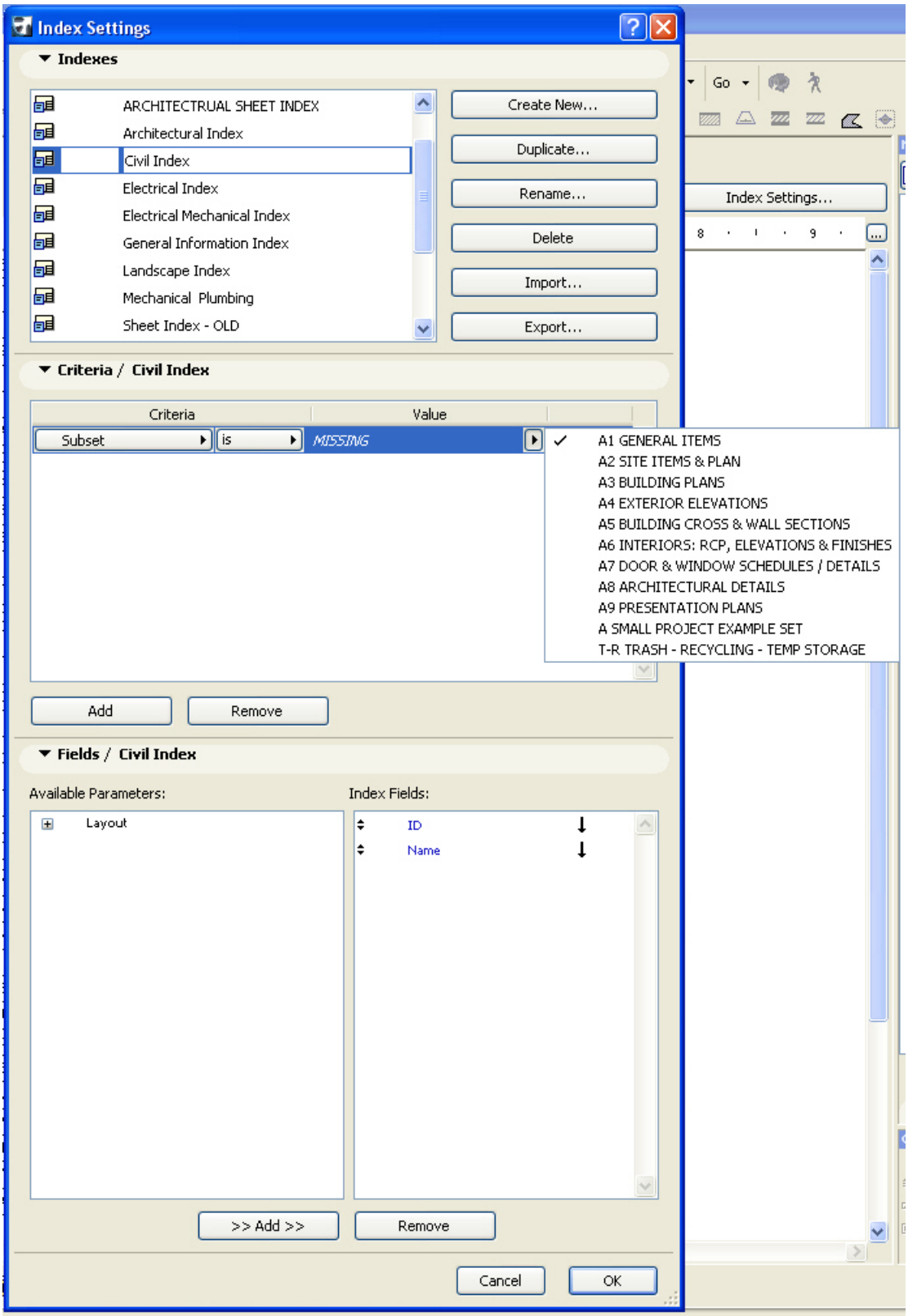
Open the object settings dialog box (Command or Ctrl-T) and browse to find the object, door or window that you want to use to replace the selected item(s).

Then syringe (Alt Ctrl Click or Command Option Click) the settings into the thumbnail preview in the lower left area of the dialog box for that new object, door or window.

In the case of doors and windows, all matching parameters will be transferred so that the new object, door or window will be set to the same size as the one you eye-droppered, and if the parameter names are the same, the trim size and material and other stuff will also now match. Click OK and the new window will replace all of your selected window(s).

In the case of updating an older object from an earlier library, the user will browse in the settings dialog box from the absorbed parameters library (an earlier version typically) to the same part within the current library, and inject as described above.

- ID Management
- Explanation...in cataloging data in schedules, and working procedures/methods.
- Creating and Maintaing Visual Legends Module files
- Explanation...(which are catalogs of user's office standards. Note that separate module files can be created for walls, etc, then placed overlapping each other, controlled by separate master layers to consolidate views).
- Procedure for selecting or modifying Complex Profile Milled Rafter Tail Operators.
- Procedure for creating Sheet Indexes with Segmented Subsets
- Explanation...setting up...advanced users only.


Index Settings
Indexes
ARCHITECTRUAL SHEET INDEX
Architectural Index
Civil Index
Electrical Index
Electrical Mechanical Index
General Information Index
Landscape Index
Mechanical Plumbing
Sheet Index - OLD
Create New...
Duplicate...
Rename...
Delete
Import...
Export...
Criteria / Civil Index
Criteria
Value
Subset
is
MISSING
A1 GENERAL ITEMS
A2 SITE ITEMS & PLAN
A3 BUILDING PLANS
A4 EXTERIOR ELEVATIONS
A5 BUILDING CROSS & WALL SECTIONS
A6 INTERIORS: RCP, ELEVATIONS & FINISHES
A7 DOOR & WINDOW SCHEDULES / DETAILS
A8 ARCHITECTURAL DETAILS
A9 PRESENTATION PLANS
A SMALL PROJECT EXAMPLE SET
T-R TRASH - RECYCLING - TEMP STORAGE
Add
Remove
Fields / Civil Index
Available Parameters:
Index Fields:
Layout
ID
Name
>> Add >>
Remove
Cancel
OK
Go
Index Settings...

LINKS TO OTHER IMPORTANT EXPLANATIONS

Hyperlinks to popular Architalk & ArchiWiki tips and tricks and AEC Bytes articles. (to be inserted into the help folder by the user and in a separate to be completed document)

Penset Stratagies (ArchiCAD Wiki)

Detailer (Karl Ottenstein)

Clone Folders

Hot Linked Modules

Parameter Transfer for Older Windows

Layer Update Trick (James Murray)

The Link Collection

Team Leader in Teamworks

Monthly Winning Tech Tips

ArchiCAD BIM Experience Kit

Detail Catalog Explained

Sheet Index, basic explanation

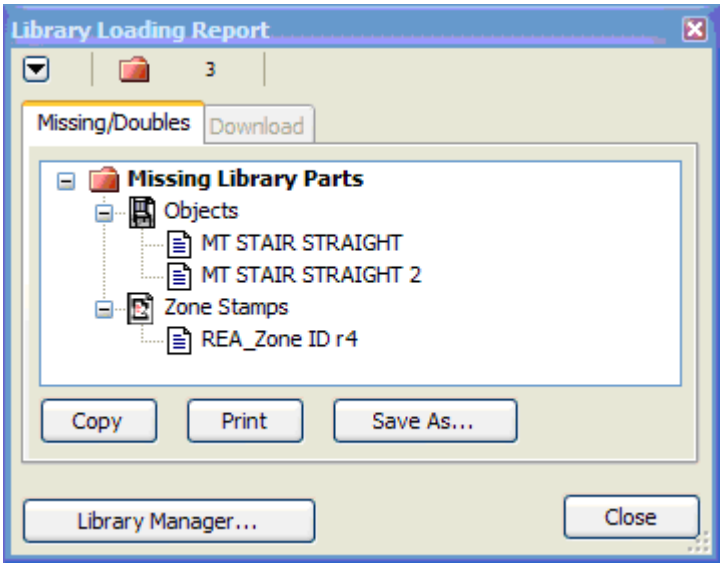
Common Dimensions on Multiple Stories (Karl Ottenstein)

EXTRA STUFF REMOVED FOR POSSIBLE REUSE

NOTE: Warning messages may appear when the sample file is opened the first time.

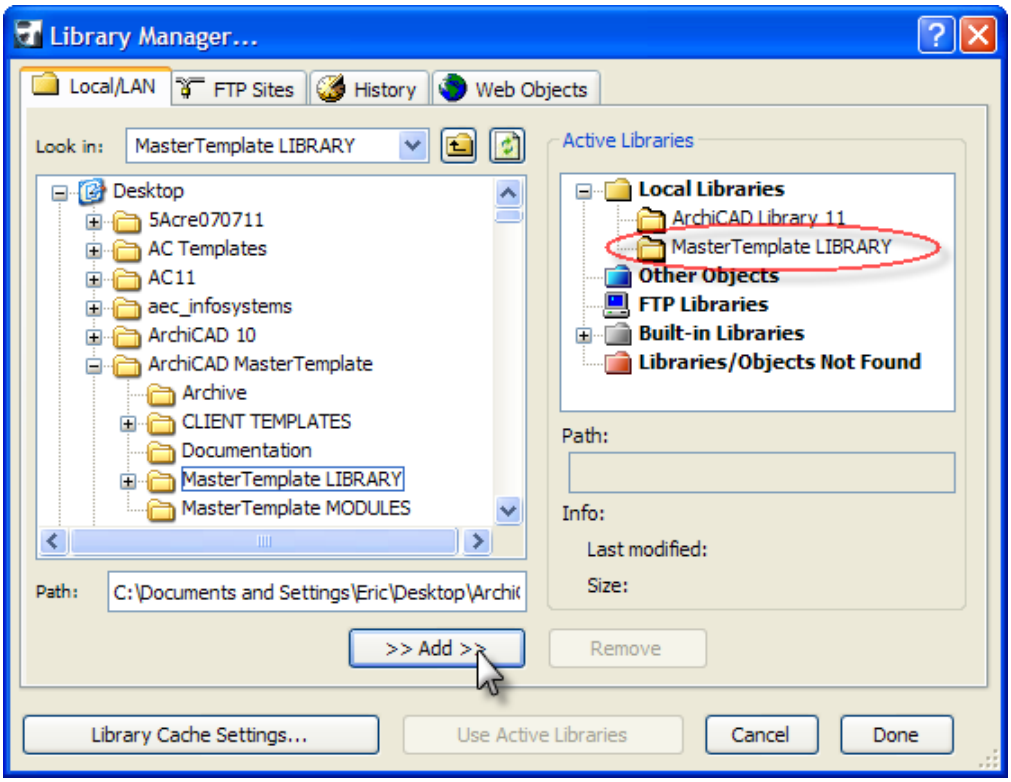
Normally a Library Manager dialog will not appear when you load the file. If the Library Manager dialog comes up while loading, or you get a Library Loading Report:

or



you will need to manually load the MasterTemplate Library, the MasterTemplate SAMPLE PROJECT LIBRARY and/or the standard ArchiCAD Library folder.

In the Library Manager dialog that pops up while loading (or after opening the file and getting a Library Loading Report as above, choose File menu / Libraries and Objects / Library Manager), navigate to the location where the template files have been downloaded and extracted, highlight the **MasterTemplate Library** folder on the left side, then click the "Add" button:



When all libraries have been "found", click the Done button to proceed.

NOTE: ArchiCAD normally will find the **MASTERTEMPLATE LIBRARY** folder without prompting as long as you leave it next to the **MasterTemplate SAMPLE.PLN** file in the AMT folder. Similarly, it will find the standard **ArchiCAD Library** folder, unless you have moved or changed the path.

Any other warning messages may safely be ignored for now - keep clicking OK or Skip or the Close button on any warning dialog or report window.